DEPARTMENT OF THE ARMY
EXECUTIVE DIRECTOR FOR CONVENTIONAL AMMUNITION
9301 CHAPEK ROAD
FORT BELVOIR, VA 22060-5527

REPLY TO
ATTENTION OF:

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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Fiscal Year 2007 (FY07) Annual Report, Single Manager for Conventional Ammunition (SMCA)

1. The SMCA Charter requires the Executive Director for Conventional Ammunition to furnish a fiscal year annual report to the Military Services and the Office of the Secretary of Defense on execution of the SMCA mission, with emphasis on measurable accomplishments, problem areas, and required actions.

2. The enclosed FY07 Annual Report uses the four major categories of performance metrics: acquisition management, production and industrial base management, stockpile management, and distribution management as its foundation. In addition, items in each category contain metrics and analysis, significant SMCA Executor items, and significant Military Service and Office of the Executive Director for Conventional Ammunition items.

Encl

WILLIAM E. MORTENSEN
Lieutenant General, USA
Executive Director for
Conventional Ammunition

DISTRIBUTION:
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ATTN: SAAL-ZP, 103 Army Pentagon, Room 2E533, Washington, D.C. 20310-0103
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1030 Air Force Pentagon, Washington, DC 20330-1030
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Commander, Ogden Air Logistics Center, ATTN: OO-ALC/CC, 7981 Georgia Street Hill Air Force Base, UT 84056-5824
Commander, U.S. Army Joint Munitions Command, ATTN: SFSJM-CG, 1 Rock Island Arsenal, Building 390, Rock Island, IL 61299
Commander, Marine Corps Systems Command, 2200 Lester Street, Quantico, VA 22134
Deputy Commander for Warfare Systems Engineering, (SEA-06) and, Director, DoN Weapons and Ordnance Safety, (SEA-OOV), Naval Sea Systems Command, 1333 Isaac Hull Avenue, Washington Navy Yard, DC 20376-5011
Director of Logistics/J4, United States Special Operations Command, ATTN: SOAL-J4-M, 7701 Tampa Point Blvd, MacDill AFB, 33621

CF:
Program Manager for Ammunition, Marine Corps Systems Command, 2200 Lester Street, Quantico, VA 22134
Deputy G3 for Support Operations, U.S. Army Materiel Command, 9301 Chapek Road, Fort Belvoir, VA 22060-5527

FY 2007 Annual Report
Single Manager for Conventional Ammunition

By

The Executive Director
For
Conventional Ammunition

Fiscal Year 2007 Annual Report
Single Manager for Conventional Ammunition

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Executive Summary

1. The FY07 Annual Report assessment of the Single Manager for Conventional Ammunition (SMCA) uses the four major categories of performance metrics as its foundation. They are: acquisition management, production and industrial base management, stockpile management, and distribution management. This format focuses on measurable accomplishments in the categories the Military Services, the SMCA Executor, and the SMCA FOA have identified as important.

2. The following is an executive summary of the topics covered in the FY07 Annual Report. Additional detail is provided in the main text.

a. Acquisition Management. The focus areas of this category are the Planning and Contracting functions of the SMCA.

(1) Metrics. There are two major indices in this category; Planning and Contracting. Represented in the first Index are the Item Transition, Hardware Price Variance, and Customer Resource Timeliness Indices as well as the Requirements Stability measure. The second Index is represented by the Technical Data Preparation metric and the Average Procurement Administration Lead Time, Customer Resource Stewardship, and Customer Delivery Indices.

(2) SMCA Executor/FOA Significant Items. The SMCA Executor's Project Manager Combat Ammunition Systems (PM CAS) used a Lean/Six Sigma process to assess the safety critical characteristics in the Technical Data Packages for all its items. The results of the process will improve the safety of the warfighter. PM CAS initiated a program to pursue a Common Low-cost Insensitive Munitions Explosive (CLIMEx) for us as explosive fills in artillery and mortar ammunition. On September 30, 2007, the Conventional Ammunition Working Capital Fund (CAWCF) was closed.

(3) Military Service and O/EDCA Significant Items. The SMCA Procurement Steering Council continues to be a productive forum for the Military Services, SMCA Executor, SMCA FOA and O/EDCA to discuss procurement related issues.

b. Production and Industrial Base Management. The focus of this category is SMCA Production Quality and Industrial Base Adequacy.

(1) Metrics. There are two indices in this category; Production Quality and Industrial Base Adequacy. Represented in the first Index are the End Item Lot Acceptance, Stockpile Quality (Within 3 Years of Production), and Number of Product Quality Deficiency Reports metrics. The second Index is represented by the Number of Critical Single Point Failure Plans, Production Base Readiness, and Organic Government Owned Contractor Operated (GOCO) Industrial Base Investment Expenditures metrics.

(2) SMCA Executor/FOA Significant Items. At the request of the Navy, the SMCA FOA is leading a team to redefine/clarify ammunition defect codes. The SMCA's

countermeasure flare team established procedures and processes that ensured delivery of countermeasure flares to the Air Force and Army in support of the Global War on Terror. The SMCA's 40MM team continues to work with producers to ensure required ammunition is produced for SMCA customers.

(3) Military Service and O/EDCA Significant Items. There are no significant items to report under this category.

c. Stockpile Management. The focus of this category is on the Surveillance, Inventory and Demilitarization functions of the SMCA.

(1) Metrics. There are three major indices in this category; Surveillance Program Execution, Inventory Characterization, and Demilitarization Program Execution. Represented in the first Index are metrics for Executable Surveillance Funding, Executable Surveillance Capacity, Inspection Backlog, and Percentage of Lots in Condition Code K for more than 45. The second Index is represented by the Accuracy Rates at GOCO Facilities, Magazine versus System Accuracy, and Denial Rates. The third Index contains Conventional Ammunition and Missile Indices and the Percent Stockpile in Demil Account and Funding measures.

(2) SMCA Executor/FOA Significant Items. The SMCA Executor and FOA initiated several Lean/Six Sigma projects to improve their support to the SMCA mission. Among the projects are a review of Ammunition Data Card preparation, storage data accuracy at SMCA depots, and re-establishment of the SMCA storage complex baseline.

(3) Military Service and O/EDCA Significant Items. The Ammunition stratification and cross-leveling effort continues to be beneficial for the Military Services with a cost avoidance of $25.2M for FY10-12. The Marine Corps partnered with the SMCA FOA to develop a second generation munitions readiness reporting system to meet the needs of the Marines.

d. Distribution Management. The focus of this category is Delivery Reliability and Quantity/Condition Code Accuracy.

(1) Metrics. There are two indices in this category; Delivery Reliability and Quantity and Condition Code Accuracy. Represented in the first Index are the Requisition Processing Time, Requisition Processing Time by Issue Priority Group, Depot Processing Time and Army Joint Munitions Command in House Processing metrics. The second Index is represented by the Percent of Supply Discrepancy Reports vs. Material Release Orders.

(2) SMCA Executor/FOA Significant Items. The SMCA FOA highlighted its role in the transportation of ammunition to support the warfighter and Foreign Military Sales. In addition, it discusses a Lean/Six Sigma green belt project that resulted in increased accuracy of the requisition priority system.

(3) Military Service and O/EDCA Significant Items. There are no significant items to report under this category.

SMCA KEY PERFORMANCE SUMMARY

1. BACKGROUND. A new addition to the FY06 annual report was the identification of indices and metrics for inclusion as a SMCA Key Performance Index (KPI). The indices and metrics in the original FY06 KPI represented the interests of the Army PEO AMMO as SMCA (Executor), the Joint Munitions Command (Field Operating Activity) and the Military Services (Service Customer). Based on Service input for FY07, the KPI was modified and the overall Surveillance Program Execution Index replaced the Condition Code K (CC-K) metric and the Demilitarization Index was added. The intent is to emphasize select metrics for cost, delivery and quality.

2. KEY PERFORMANCE INDEX (KPI). The KPI consists of the indices and metrics shown in Figure 1. Each of the indices and metrics is analyzed in detail later in the report. This index is rated **GREEN** for FY07.

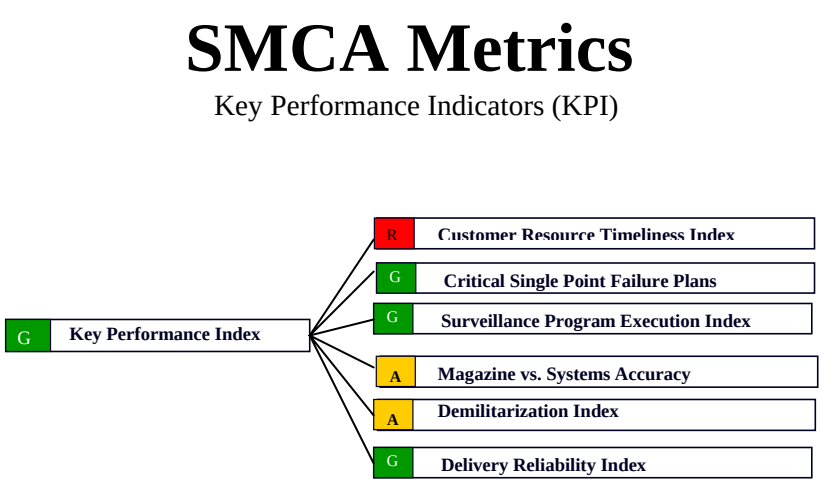


Figure 1

A. Customer Resource Timeliness Index. This index is weighted as 15% of the SMCA KPI. The intent of this index is to indicate how the receipt of funding and orders from the Military Services might impact the ability of the SMCA to execute its mission. It consists of the following data points: Military Service Dollars Returned (expiring year by quarter) and the Expired Dollars Returned by the SMCA to each of the Military Services.
ANALYSIS: This index was rated **RED** for FY07 and **GREEN** for FY06. The major reason for change was a shift in measurement methodology for the two metrics; percent of funds received from Military Service customers within 80 days of the appropriation act, measured by dollar value and percent of orders received from Military Service customers within 80 days of the appropriations act, measured by program count. In FY07 the metric was changed to using the Execution Price List (EPL) as the baseline instead of the total number of programs planned by Military Service customers that materialized from the EPL. This change was approved by the

Military Services, SMCA Executor, and SMCA Field Operating Activity and reflects the methodology used in the FY05 Annual Report.

B. Number of Critical Single Point Failure (SPF) Plans. This metric is weighted as 20% of the SMCA KPI. Critical SPFs are those single point sources in the ammunition supply chain that pose an unacceptable risk to warfighter missions if the source is lost. This metric represents the number of critical SPFs with mitigation plans that have been developed or funded for development divided by the number of critical SPF mitigation plans required, which in FY07 were 66 plans. With mitigation plans in place, the adverse impact to the warfighter is decreased.
ANALYSIS: This metric is rated as **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** in FY06 and **AMBER** in FY05.

C. Surveillance Program Execution Index. This index is weighted as 15% of the SMCA KPI. Inability to meet the goal in this metric can have a detrimental impact on the warfighter; while stocks have quality issues, munitions availability to the warfighter may be impacted.
ANALYSIS: This index is rated **GREEN** for FY07. For comparative analysis, this index was rated **AMBER** in FY06 and rated **RED** in FY05.

D. Magazine vs. System Accuracy. This metric is weighted as 20% of the SMCA KPI. The intent of this metric is to indicate inventory accuracy. The lower the inventory accuracy rate, the more likely the chance of not meeting a Military Service's delivery requirement.
ANALYSIS: This metric was rated **AMBER** for FY07. For comparative analysis, this metric was rated **AMBER** in FY06 and FY05.

E. Demilitarization Index. This index is weighted as 10% of the SMCA KPI, and indicates how well the SMCA is executing its DoD Munitions Demilitarization mission. The inability to meet the goals in this metric can have a detrimental impact on the warfighter by constraining serviceable stock storage space, already short dollars for inventory management, issue efficiency and safety as the DoD munitions stockpile ages. This was added as a KPI based on Service input for FY07.
ANALYSIS: This index is rated **AMBER** for FY07 and was rated **AMBER** for FY06 and FY05.

F. Delivery Reliability Index. This index is weighted as 20% of the SMCA KPI. This index indicates how well the SMCA is meeting the munitions delivery requirements of the Military Services. The Delivery Reliability Index consists of metrics for Requisition Processing Time, Requisition Processing Time by Issue Priority Group, and Depot Processing Time.
ANALYSIS: This index is rated **GREEN** for FY07 and was rated **GREEN** for FY06.

3. SUMMARY. The metrics/indices in the SMCA KPI are tools that allow the SMCA community to assess the state of their SMCA business environment at a higher level. The KPI is designed to help measure progress towards SMCA organizational goals, and is in keeping with the SMCA philosophy of efficiency and effectiveness.

ACQUISITION MANAGEMENT

1. METRICS. This category consists of the Planning and Contracting Indices and is comprised of the indices and metrics in Figure 2.

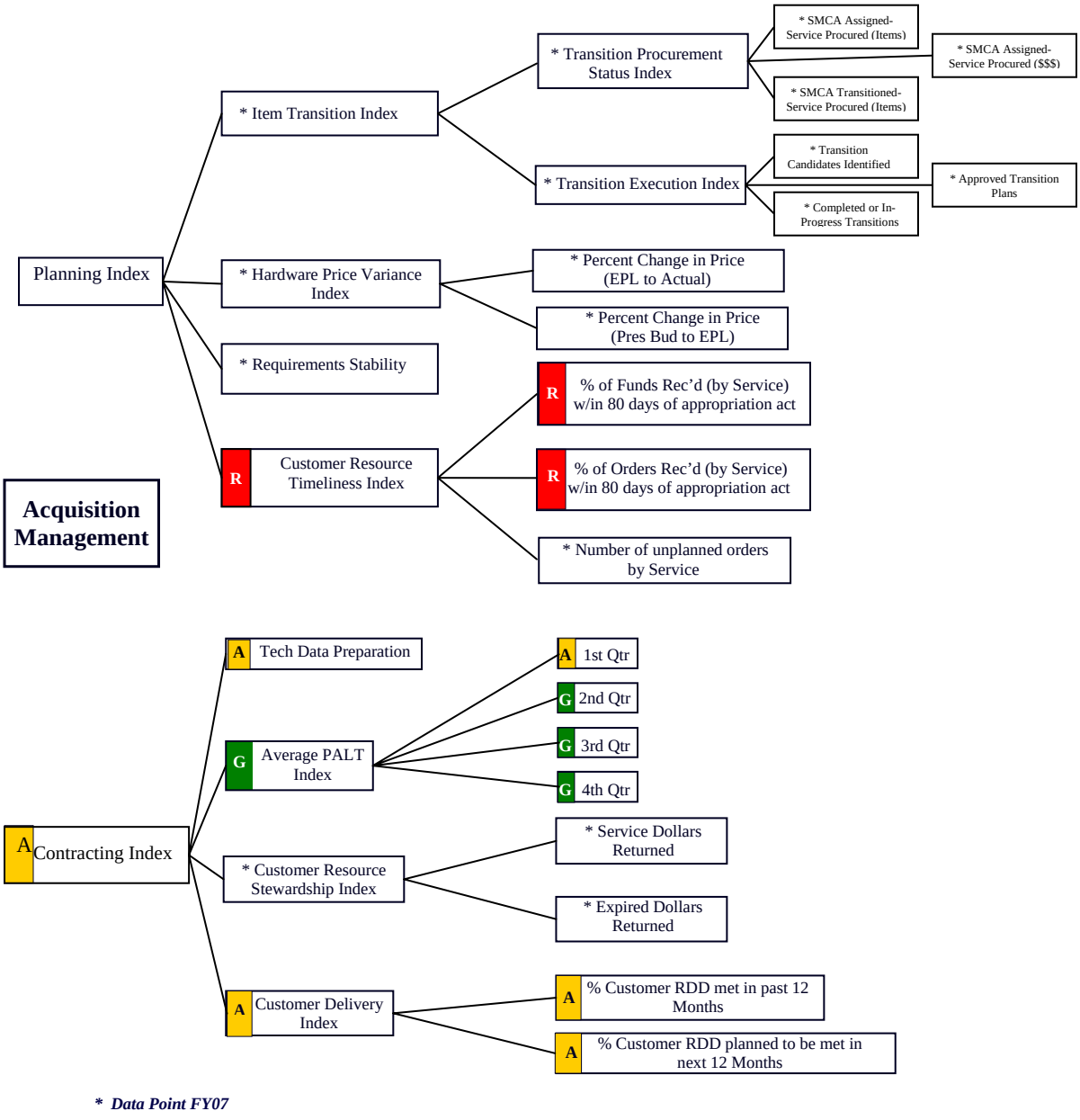


Figure 2

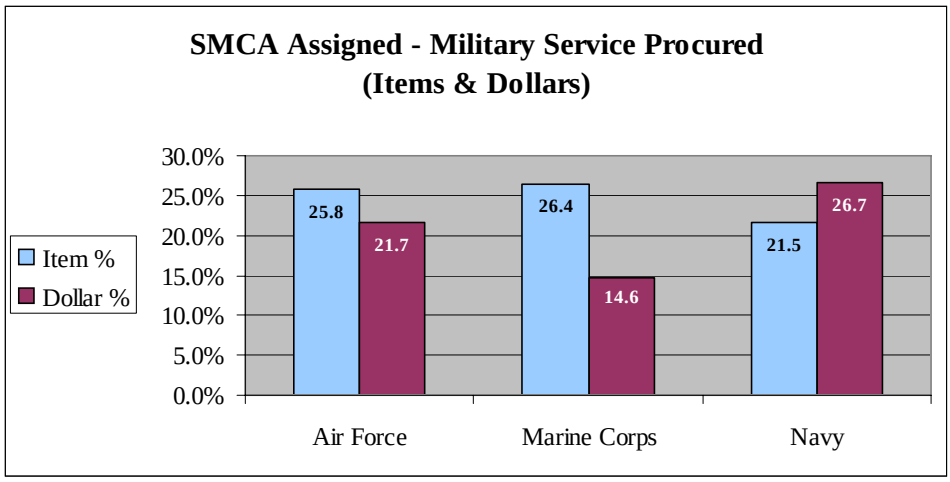
A. Planning Index.

1. Item Transition Index. This index was established in FY06 and consists of the six data points listed below. The index is intended to assess the status of the transition process for items defined as "SMCA-assigned" from the developing Military Services to the SMCA for procurement and logistics support functions in accordance with the guidance in DoD Instruction 5160.68. SMCA-assigned items are defined in DoD Directive 5160.65, and include such items as small arms ammunition, bombs, demolition materiel, pyrotechnics, and grenades. As a result of guidance from the EDCA in April 2007, the goal is for the Military Services to achieve full transition to the SMCA for "SMCA-assigned" items; therefore, a Logistics Transition Status Index originally planned for the FY07 report is no longer required.

a. Transition Procurement Status Index. This index consisted of three data points in FY06 and is reported as data points for this report as well. The purpose is to measure the "health" of the transition process by providing a snapshot of the degree that Military Service developed "SMCA-assigned" items have been transitioned to the SMCA for procurement. Data for FY06 and FY07 are for demonstration and establishment of baselines only; therefore, no value is assigned to this index. Rating criteria may be established for FY08 data.

1) SMCA Assigned – Military Service Procured (Items). This data point is the percentage of the number of "SMCA-assigned" items (unique DODICs) not procured through the SMCA. It is computed as a percentage of the total number of "SMCA-assigned" items procured by each Military Service. The results of this data are in Figure 3.

2) SMCA Assigned – Military Service Procured (Dollars). This data point is the percentage of the dollar value of "SMCA-assigned" items not procured through the SMCA. It is computed as a percentage of the total dollar value of all "SMCA Assigned" items procured by the Military Service. The results of this data are in Figure 3.



	Air Force	Marine Corps	Navy
Items not Procured by SMCA	33	23	20
Total Items Procured	128	87	93
Dollars not through SMCA ($M)	$138.98	$65.59	$68.53
Total Dollars ($M)	$640.72	$448.27	$256.88

Figure 3

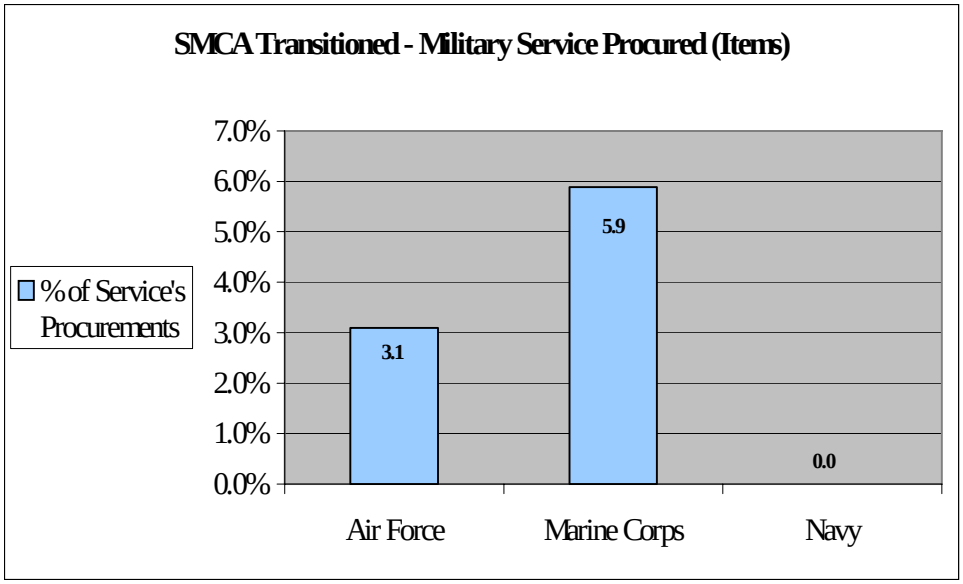
ANALYSIS: The first data point defines an item as a single DODIC, and each DODIC is given equal weight regardless of volume or unit cost. The second data point assesses the same data from a dollar value perspective. Evaluating both together provides a more balanced measurement than looking at each measurement separately. The FY07 item data point indicates each Service is roughly equal in the percentage of "SMCA-assigned" items procured by the SMCA. The dollar value data point indicates a wider disparity.

The following is a comparison of results from FY06 with FY07:

	Military Service Procured (Items)		Military Service Procured (Dollars)	
	FY06	FY07	FY06	FY07
Air Force:	13.6%	25.8%	18.8%	21.7%
Marine Corps:	32.2%	26.4%	20.7%	14.6%
Navy:	47.5%	21.3%	38.5%	26.7%

Although there is too little data to draw any conclusions, a comparison of the year-to-year total percentages for both Military Service procured items and dollars shows an upward trend. Drilling deeper into the data shows the following results: Over one-third of the Air Force's non-SMCA procured items were purchased through either the Navy (nine items or 27.3%) or the Marine Corps (three items or 9.4%). The dollar value of these procurements was $7.06M (5.1%). Similarly, 21.7% of the Marine Corps' non-SMCA procured items were purchased through either the Navy (four items or 17.4%) or SOCOM (one item or 4.3%). The dollar value of these procurements was $5.4M (8.3%). Finally, 21.7% of the Navy's non-SMCA procured items were purchased through the Marine Corps (five items) with a total dollar value of $1.35M (2.0%).

3) SMCA Transitioned – Military Service Procured (Items). This data point is the percentage of items previously transitioned / procured by the SMCA, but now procured directly by a Military Service. It is computed as a percentage of all transitioned items procured by the Military Service. The results of this data are in Figure 4.



	Air Force	Marine Corps	Navy
SMCA Directly Procured Items	3	4	0
Total Transitioned Items Procured	97	68	64

Figure 4

ANALYSIS: This data point examines items that have previously been transitioned for procurement to the SMCA but are now procured directly by one or more Military Service. The four Marine Corps items procured were through the Foreign Comparative Testing program. One of the three Air Force items was procured through the Navy.

The following is a comparison of results from FY06 with FY07:

	FY06	FY07
Air Force:	0.0%	3.1%
Marine Corps:	11.5%	5.9%
Navy:	6.5%	0.0%

Although insufficient data is available to draw meaningful conclusions, comparisons of the year-to-year totals show a downward trend.

b. Transition Execution Index. This index consisted of one data point in FY06 with plans to expand to three data points for FY07. The purpose of the index is to evaluate the level of transition execution for SMCA assigned items. Data for FY06 and FY07 are for demonstration and establishment of baselines only; therefore, no value is assigned to this index. Rating criteria may be established for FY08 data.

1) Transition Candidates Identified. This data point shows the number of "SMCA-assigned" items identified as candidates for transition of procurement and logistics

support functions to the SMCA by each Military Service. For FY07, the Air Force identified 39 items, the Marine Corps 53 items, and the Navy 57 items (Total: 149 items).
ANALYSIS: In FY06, the SMCA Executor submitted a call letter to each of the Military Services requesting a list of items they planned to transition to the SMCA over the following two fiscal years. Based on pending changes to DoDI 5160.68 and JCAPP 2, this year's call letter requested the Military Services provide a list of all "SMCA-assigned" items that have not fully transitioned to the SMCA. Each is considered a transition candidate. As a result, the number of candidates reported increased significantly over last year.

2) Approved Transition Plans. This data point shows the number of approved transition plans for each developing Military Service's "SMCA-assigned" items. In the future, this metric will be computed as a percentage of the items identified as candidates for transition by the Military Service in the current and previous years. For FY07, no Military Service has completed an approved transition plan (see Analysis below for explanation).

3) Completed or In-Progress Transitions. This data point shows the number of completed or in-progress transition plans for each Military Service's "SMCA-assigned" items. In the future, this metric will be computed as a percentage of the items identified for transition by the Military Service in the current and previous years. For FY07, the Navy completed ten and had three in-progress transitions. The other Military Services have no completed or in-progress transition plans (see Analysis below for explanation).
ANALYSIS: In FY06, NAVSEA identified a significant number of items to be transitioned to the SMCA within a relatively short period of time. This event highlighted the importance having a deliberative process in place to evaluate how and when items should be transitioned in order for Army Joint Munitions Command (JMC) personnel and Army PEO Ammo Project Managers to effectively absorb the additional workload. Prior to this, Army Project Management offices had little or no involvement in transitioning.

Army PM Joint Services and NAVSEA worked out an interim process which included the gaining Project Management offices and appropriate JMC representatives. Working groups developed decision worksheets in lieu of formal Transition Plans for each item identified by NAVSEA. Subsequently, NAVSEA has transitioned 10 items in accordance with the decision worksheets. To complete these transitions, NAVSEA forwarded a completed Alternate Transition Plan Data Checklist to JMC and added the requirement to the Integrated Conventional Ammunition Procurement Plan (ICAPP). NAVSEA used the same process prior to FY06. NAVSEA is in the process of completing the Alternate Transition Plan Data Checklist for three additional items.

The annual call letter planned for issuance in February 2007 was sent out in July 2007 in order to implement pending changes to policies and procedures that all SMCA assigned items should be fully transitioned to the SMCA. The transition candidates identified in response to the FY07 transition call letter were delayed approximately six months and were not acted on by end of FY reporting period. The FY07 candidates are planned to be included in the FY08 process. Delays were due to changing DoD policy, procedures and executive guidance. Pending changes to DoD Directive 5160.65, DoD Instruction 5160.68, and JCAPP 2, as well as the guidance from EDCA, are expected to improve the transition process for FY08. The three documents are currently in coordination. The revised draft version of JCAPP 2 replaces the Transition

Checklists with a Transition Plan. PM Joint Services is sponsoring a Lean Six Sigma project to standardize the transition process.

2. Hardware Price Variance Index. This index consists of the measures listed below.

a. Percent change in price from the Execution Price List (EPL) to actual cost. This measure represents the price variance for hardware costs from the EPL to the actual cost. The actual cost reflects the price at the completion of the full procurement. This metric measures the percentage of items that are within the approved hardware price variance of +/- 10%, based on a comparison of the published EPL and actual cost. The percentage in the rating criteria represents items below 10%, within +/- 10%, and above 10%. For FY07, the Military Services and SMCA representatives determined that the FY06 rating criteria of green, amber, and red did not accurately portray the analysis of the variances and were removed. Figure 5 shows the percentage of items with price variances of less than 10% as yellow, within +/- 10% as green, and greater than 10% as red.

ANALYSIS: In FY07, this data point indicated 57% of the fully obligated programs were priced within 10% of the published EPL, as shown in green in Figure 5. This FY07 metric will serve as a new baseline for analysis of price variance. 37% of all items were below 10% which shows a lower unit cost to the customer. Only 6% of the items reviewed in FY07 were above 10%. Some reasons for variation in FY07 include: higher executed quantities which lowered the executed unit cost for all lower pricing by commodities; lower contract option prices for components and elimination of the requirement to procure supplemental charges in the Artillery/Mortars family. In the cases where variations were above 10% goal, quantities did not materialize as predicted in the EPL and higher prices were used.

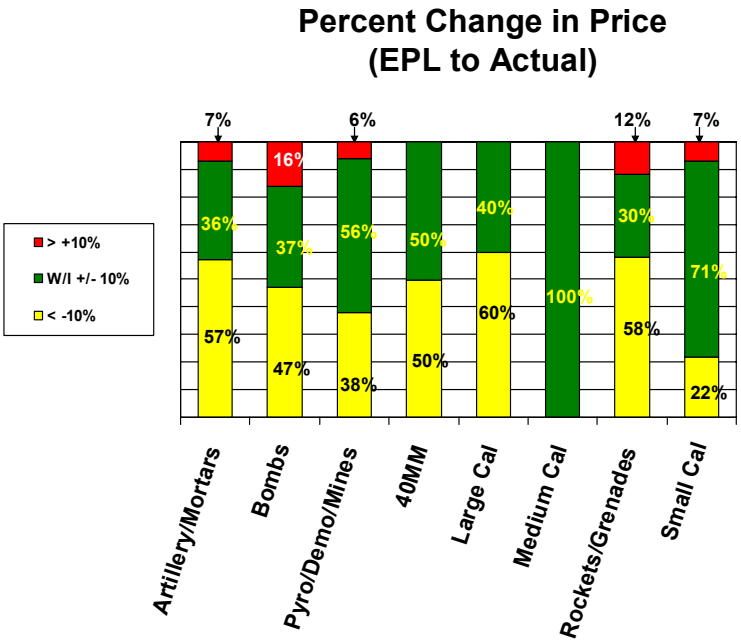


Figure 5

b. Percent change in price from President's Budget (PRESBUD) to EPL. This measure represents the price variance for hardware costs from the PRESBUD to the EPL. This metric measures the percentage of items that are within the approved hardware price variance of +/- 10%, based on a comparison of the cost at the completion of the PRESBUD to the completion of the EPL. The percentage in the rating criteria represents items below 10%, within +/- 10%, and above 10%. Figure 6 shows the percentage of items with price variances of less than 10% as yellow, within +/- 10% as green, and greater than 10% as red.

ANALYSIS: For FY07, this data point indicated 58% of EPL items fell within +/-10% of the PRESBUD, shown in green in figure 6. This FY07 metric will serve as a new baseline for analysis of price variance. 19% of the items reviewed were less than 10%, showing a lower projected Unit Cost to the customer shown in yellow; and 24% fell above 10% are in red. Some reasons for variation in FY07 include: higher projected quantities which lowered the projected unit costs for all lower priced commodities; lower projected contract option prices for components and elimination of the projected requirements to procure supplemental charges in the Artillery/Mortars family. In the cases where item variation was above the 10% goal, quantities did not materialize as predicted in the EPL.

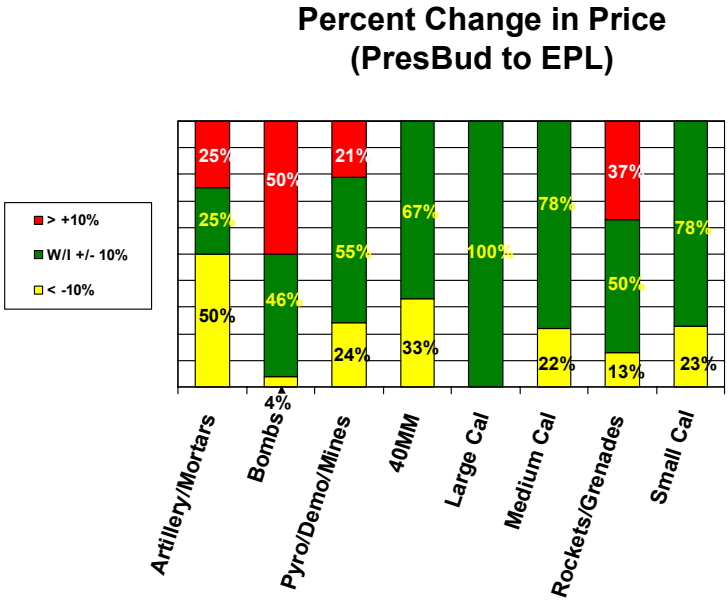


Figure 6

3. Requirements Stability. This is a data point, and represents the reliability of the Military Services' procurement requirements through the Planning, Programming, Budgeting, and Execution System (PPBES) process. Source of the plan data is FY07 EPL for the Army and Military Services. Source of actual data is the Electronic Military Interdepartmental Purchase Request (EMIPR) for Military Services and Program Budget Accounting System (PBAS) for Army. Supplemental funds received are not included in this metric.

ANALYSIS: As shown in Figure 7, the Army funded 81% of its plan, the Navy funded 57% of its plan, the Air Force funded 77% of its plan, and the Marine Corps funded 68% of its plan in FY07. For comparative analysis, in FY06 the Army funded 95% of plan, the Navy funded 81%

of plan, the Air Force funded 74% of plan, and the Marine Corps funded 92% of plan in FY06. In FY05 the Army funded 95% of plan, the Navy funded 105% of the plan, the Air Force funded 83% of plan, and the Marine Corps funded 62% of plan. The primary reason for variances in each year was reprogramming to meet requirements for the war effort. Variances are expected to continue in FY08 as a result of the continuing war effort.

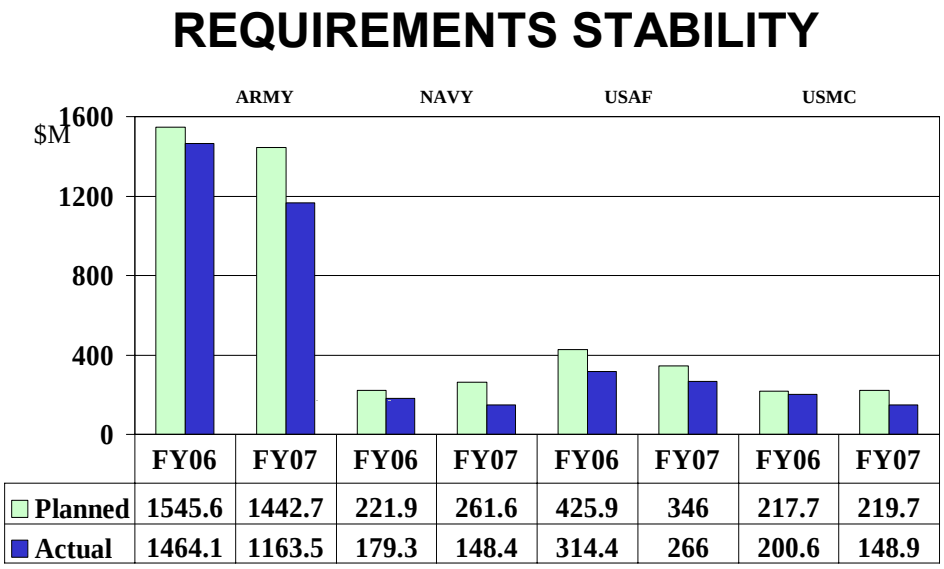
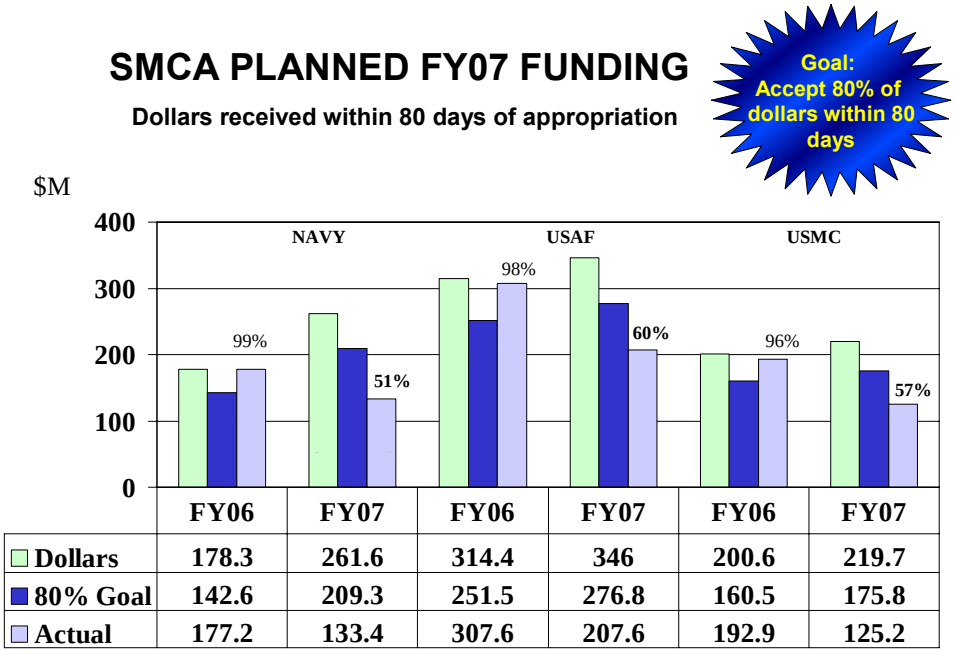


Figure 7

4. Customer Resource Timeliness Index (KPI). This index consists of the measures listed below and indicates how the receipt of funding and orders from the Military Services might impact the SMCA's ability to execute its mission. This index is rated **RED** for FY07.

a. Percent of funds received from Military Service customers within 80 days of the appropriation act, measured by dollar value. This metric is weighted as 20% of the Customer Resource Timeliness Index and measures the ability of each Military Service to provide funding within 80 days of the signed appropriations act. The EMPR is the source of the data and reflects only those items procured by the SMCA. Rating criteria is as follows: green is greater than or equal to 80% funding received within 80 days of the signed appropriation; red is less than 80% funding received within this timeframe. The signed date of the appropriation for FY07 was 1 Oct. 80% of funding was needed by 19 Dec to be rated green.
ANALYSIS: This metric is rated **RED** for FY07 with the Navy, Air Force and Marine Corps achieving an average overall funding of 56%. The Navy reached 51%, the Air Force 60%, and the Marine Corps 57%. In FY07 the metric was changed to using the Execution Price List (EPL) as the baseline instead of the total number of programs planned by Military Service customers that materialized from the EPL. This change was approved by the Military Services, SMCA Executor, and SMCA Field Operating Activity and reflects the methodology used in the FY05 Annual Report.



	FY06	FY07	FY06	FY07	FY06	FY07
Dollars	178.3	261.6	314.4	346	200.6	219.7
80% Goal	142.6	209.3	251.5	276.8	160.5	175.8
Actual	177.2	133.4	307.6	207.6	192.9	125.2

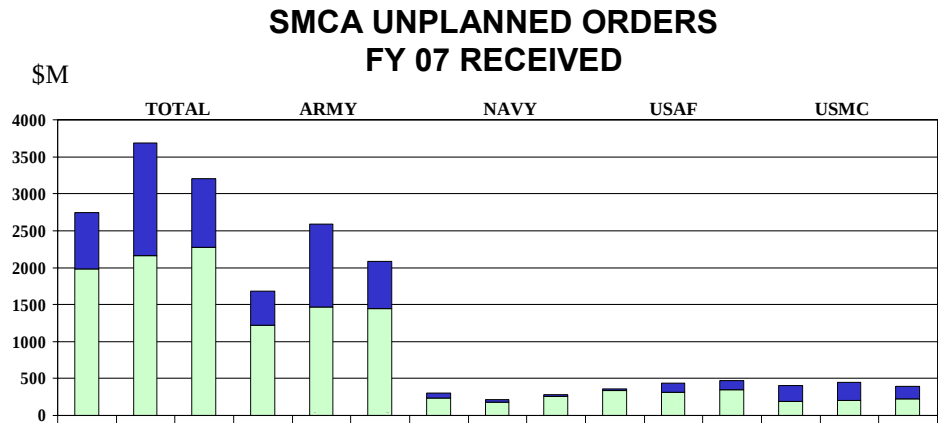
Figure 8

b. Percent of orders received from Military Service customers within 80 days of the appropriations act, measured by program count. This metric is weighted as 80% of the Customer Resource Timeliness Index and shows the number of programs planned by the Military Service customers that materialized from the Execution Price List (EPL) compared the number of orders received within 80 days of the signed appropriations act. EMIPR is the source of the actual data. Rating criteria is: Green is greater than or equal to 80% orders received within 80 days of signed appropriations and RED is less than 80% orders received within this timeframe. The signed date of the appropriation for FY07 was 1 Oct. 80% of orders were needed by 19 Dec to be rated green.

ANALYSIS: This metric is rated **RED** for FY07 with the Navy, Air Force and Marine Corps achieving an overall average of 47% of orders received by the 80 day timeframe. The Navy achieved 67%, the Air Force 35% and the Marine Corps 40%. In FY07 the metric was changed to using the Execution Price List (EPL) as the baseline instead of the total number of programs planned by Military Service customers that materialized from the EPL. This change was approved by the Military Services, SMCA Executor, and SMCA Field Operating Activity and reflects the methodology used in the FY05 Annual Report.

c. Number of unplanned orders segregated by Military Service. This is a data point for FY07, and indicates the dollar value of "walk in" orders for each of the Military Services, i.e., orders that were received but not budgeted for and therefore not listed on the EPL. This data measures the impact on the SMCA due to unplanned orders. Source data is EMIPR and the PBAS.

ANALYSIS: As shown in figure 9, The Army's unplanned orders in FY07 were 31% of total orders, Navy's were 6%, Air Force's were 35%, and Marine Corps' were 43%. For comparative analysis, the Army unplanned orders in FY06 were 43% of total orders, Navy were 16%, Air Force were 28%, and Marine Corps were 55%. In FY05, the Army unplanned orders were 27% of total orders, Navy were 21%, Air Force were 6%, and Marine Corps were 53%. The primary reason for unplanned orders in each year was to support the ongoing war effort. The trend in unplanned orders is expected to continue in FY08 as a result of the war effort.



	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07
U	763	1524	935	462	1119	645	63.9	33.7	17	20.9	123	121	216	249	168
P	1985	2158	2270	1221	1464	1443	237	179	262	338	314	346	189	201	220

Figure 9

B. <u>Contracting Index</u>. The contracting index is intended to measure select key factors in the SMCA ammunition procurement/contracting process. This index is comprised of the following indices: Technical Data Preparation, Average Procurement Administrative Lead Time, Customer Resource Stewardship, and Customer Delivery.

1. Technical Data Preparation (TDP). This metric measures timeliness for the delivery of Technical Data Packages (TDP) to support acquisition. It tracks/reports the ability to deliver TDPs against the customer's established due dates. This metric also takes into account the Joint Conventional Ammunition Policies and Procedures (JCAPP) 9 requirement for requesting TDPs at least 120 days prior to the TDP Acquisition for Local Procurement date. For FY07, the metric is more inclusive than in FY06; since the FY06 data accounted for only those TDPs processed at the Army Armament Research, Development and Engineering Center (ARDEC) whereas for FY07 five additional Engineering Activities are included. Rating criteria is: green is 75% or more of the requested TDPs delivered on or before customer due date; amber is less than 75% but more than 60% of requested TDPs delivered on or before customer due date; red is less than or equal to 60% of requested TDPs delivered on or before customer due date.
ANALYSIS: This metric is rated **AMBER** for FY07. A direct comparison of last year's report should not be made against this year's report. In FY06, this metric was reported at 83% and

accounted for only those TDPs processed at ARDEC. A direct comparison is 83% (FY06) versus 74% (FY07). The metric was expanded in FY07 to account for all agencies providing TDPs to customers in support of SMCA acquisitions. The following are the actual status/percentage breakout of all TDPs due within the rating period:

- On-time delivery: 67.26%
- Late delivery: 26.79%
- TDPs not delivered (overdue): 5.95%

2. Average Procurement Administration Lead Time (PALT) Index. This index is a rollup of each of the four quarters of FY07. PALT is defined as the time interval between receipt of a complete/valid procurement package in the contracting office and contract line item number (CLIN) award. Weighting for each quarter is based on the number of CLINs awarded. The PALT per FY quarter metric is the average number of PALT days for awards made during a quarter as compared to a planned standard. The source for this information is the Automated Procurement Management System (APMS), which includes all CLINs awarded by the SMCA FOA. The rating criteria for this metric are shown in Table 1.

PALT RATING CRITERIA

QTR	GREEN	AMBER	RED
1st	< 45 days	> 45 < 60 days	> 60 days
2nd	< 60 days	> 60 < 90 days	> 90 days
3rd	< 60 days	> 60 < 90 days	> 90 days
4th	< 90 days	> 90 < 110days	> 110 days

Table 1

ANALYSIS: Overall, this metric is rated **GREEN** for FY07. This metric was AMBER for 1st Quarter (PALT of 48 days against the standard of 45 days) and was GREEN for all remaining Quarters as reflected in Figure 10. For comparative analysis, this metric was rated **GREEN** for all of FY06. As discussed in the O/EDCA metrics meeting on 11 Sep 07, PALT data provides a lagging metric which indicates overarching historical data which can be analyzed for general trends as well as anomalies in the procurement/award process. This "look back" feature allows the Acquisition Center to determine if there are systemic problem areas that need to be addressed and corrected; or, if a negative result is manifested due to a specific circumstance. For example, the delay of a major source selection acquisition could, in and of itself, cause a large shift in the days of PALT accrued for the totality of Procurement Request Order Numbers (PRONs) being tracked. This has happened in the past on a 40MM systems acquisition. In that case, the Acquisition Center knew of the unavoidable delay, and understood why the metric was skewed toward the amber/red portion of the rating criteria.

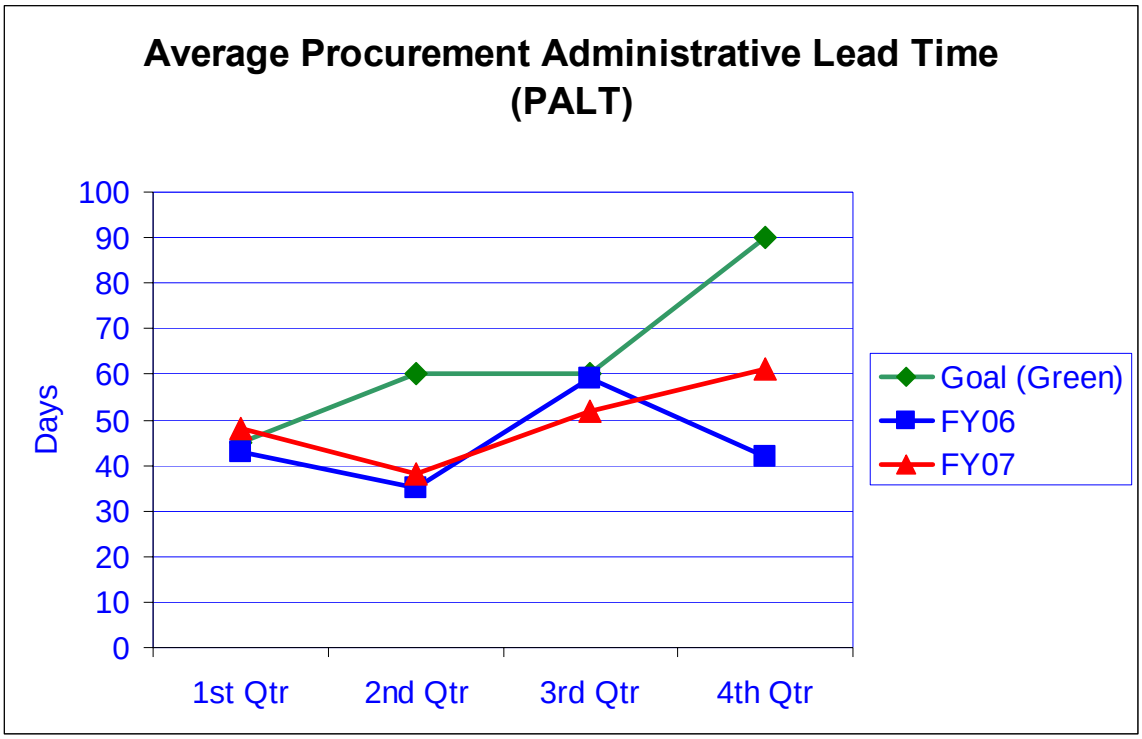


Figure 10

3. Customer Resource Stewardship Index. This index consists of the following data point measures and demonstrates the SMCA's timeliness in returning unexpended customer funds.

a. Military Service Dollars Returned (expiring year by quarter). This is a data point and shows the amount of Military Service dollars returned in the last year of the appropriation's life.

ANALYSIS: As shown in figure 11, the total returned FY05 expiring year funds in FY07 were $11.657M. The dollar amount of each Military Service was Navy, $2.996M; Air Force, $7.931M; and Marine Corps, $.730M. For a comparative analysis, FY04 expiring year funds in FY06 for each military service Navy, $1.9M; Air Force, $4.0M, and Marine Corps, $.9M; for a total returned of $6.8M. The following percentages of Military Services' expiring FY05 dollars were returned during the 4th quarter: Navy 77% (Jul-2%, Aug-9%, Sep-66%); Air Force 7% (Jul-<1%, Aug-3%, Sep-3%); and Marine Corps 26% (Jul-3%, Aug-6%, Sep-17%). For comparative analysis, in FY06 the percentages of Military Services expiring FY04 dollars returned were Navy, 32%; Air Force, 25%; and Marine Corps, 33%. The data for this metric was changed slightly for FY07 to show a greater three month detail in the 4th quarter.

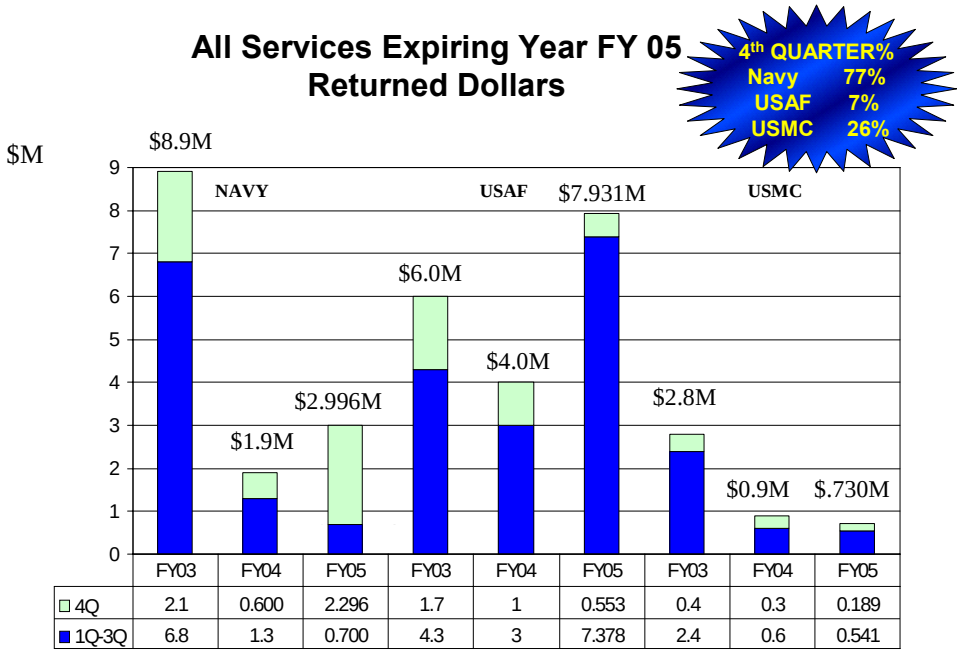


Figure 11

b. Expired Dollars Returned by the SMCA to each of the Military Services. This is a data point. Source of data is EMIPR.
ANALYSIS: In FY04, the SMCA received $729.2M from the Military Services. As indicated by the data, there has not been a problem with the SMCA returning large amounts of expired dollars in the final year of availability to obligate. During FY07, the SMCA returned expired FY04 dollars to the Military Services in the amount of $.3202M which represents .04% of the FY04 dollars received. For comparative analysis, the SMCA received $895.9M from the Military Services in FY03. During FY06, the SMCA returned expired FY03 dollars to the Military Services in the amount of $.138M which represents .015% of the FY03 dollars received. In FY02 the SMCA received $609.7M from the Military Services. During FY05 the SMCA returned expired FY02 dollars to the Military Services in the amount of $.130M which represents .02% of the FY02 dollars received.

4. Customer Delivery Index. This index consists of the following two metrics (each with a weighting of 50% of the total index) and displays the SMCA's ability to meet the customer's ammunition stockpile delivery requirements. The data source for the metrics is the Production Statistics (PRODSTAT) database managed by the Joint Munitions Command (JMC).
ANALYSIS: The overall rating for this index is **AMBER** at 90.1% for FY07. For comparative analysis, the overall rating for this index was **AMBER** at 87.6% for FY06. Performance under these metrics continues to improve through a heightened awareness of the need for on-time customer delivery, training, emphasis and promotion of more reliable forecasting techniques, aggressive problem solving, earlier identification of items with the potential of being late, and improved data accuracy. During FY07, the SMCA FOA completed a Lean Six Sigma Black Belt Project titled "Optimize Ammunition Data Management Process". The project established who, how and when data in PRODSTAT is updated, resulting in a more consistent PRODSTAT

update process; thereby improving the data used in the Customer Delivery Index. Pilot results indicate greater accuracy as there is a significant decrease in the overall data error rate from 20% down to 4.7% as a result of a more consistent PRODSTAT update process. Other planned improvements to the Customer Deliver Index data source include implementation of the PRODSTAT Refresh system in early FY08. This new system will feature the ability to perform real time data analysis via built in metrics capabilities.

a. Percent Customer Required Delivery Date (CRDD) Met in the Past 12 Months (FY07). This metric is weighted as 50% of the Customer Delivery Index and looks at quantities due over the past 12 month period, as defined by the CRDD, and compares that with how much quantity was actually made available to the customer by that CRDD. Rating: green is greater than or equal to 95%; amber is 85% - 94.99%; red is less than 85%.

ANALYSIS: As shown in Figure 12, at 89.4%, this metric is rated **AMBER** for FY07. While the FY07 data of 89.4% shows actual execution to be slightly lower than forecasted (90.1%), it is a measurable improvement over the FY06 actual execution of 85.2% and the FY05 actual execution of 83.1%. Some of the driving factors include delayed delivery of government furnished materiel (M935 fuzes) as well as several critical defects discovered in various components which precluded deliveries in the mortar family, and the impact of BRAC decisions that delayed selection of adequate production facilities for M82 Percussion Primers in the fuze family. Another driving factor was a delay in the production schedule for M228 Practice Grenade Fuzes in the grenade family due to problems with automated assembly line equipment. The producer has hired specialized automation experts to debug the equipment and processes and expects to exceed schedule within one year. The 40mm production delays were due to various quality production problems for components. The D544 155mm HE Artillery delivery backlog resulting from changing the explosive filler from TNT to Comp B in FY03 continues to diminish. The Artillery Customer Delivery Index for FY08 is forecasted to improve to 96%.

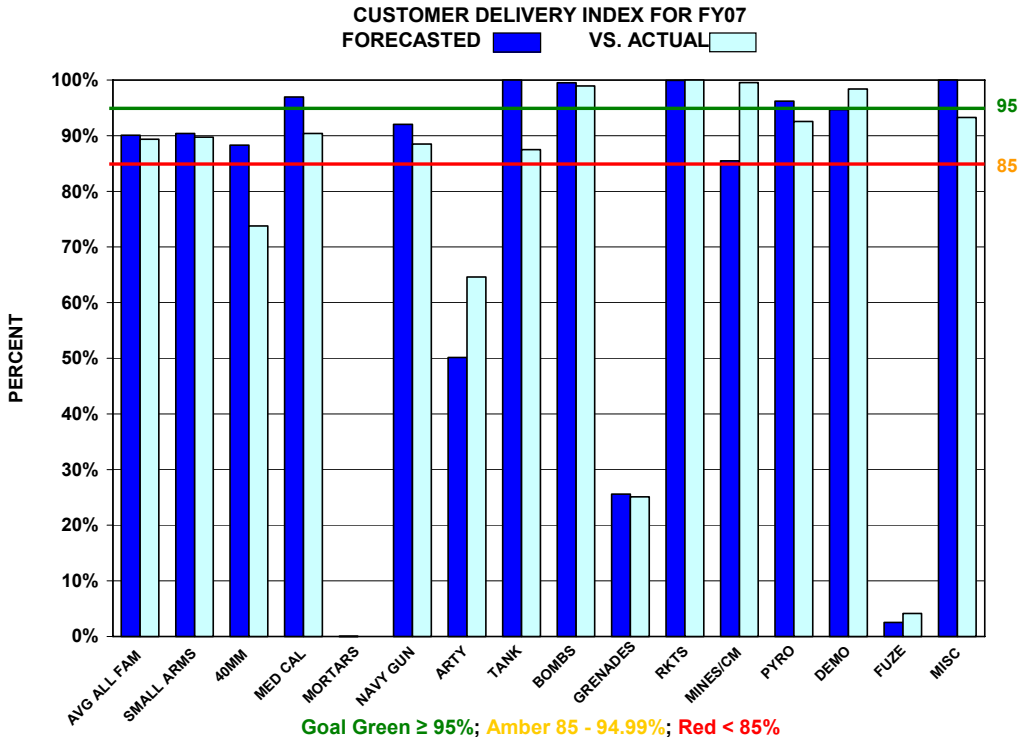


Figure 12

b. Percent CRDD Planned to be met in the Next 12 Months (FY08). This metric is weighted as 50% of the Customer Delivery Index and is a projection for how much of the quantity due, as defined by the CRDD, over the next 12 months is currently forecast to be available to the customer by the CRDD. Rating criteria is as follows: green is greater than or equal to 95% available to the customer by CRDD; amber is 85% - 94.99%; red is less than 85%. **ANALYSIS:** As shown in Figure 13, with a forecast of 90.9%, this metric is rated **AMBER** for FY07. For comparative analysis, this metric was rated **AMBER** (90.1%,) for FY06, and **RED** (83.8%) for FY05. Factors include the delayed delivery of government furnished materiel and component defects in the mortar family. These orders are now anticipated to be complete in June 2008. The impact of BRAC decisions continues to delay production for M82 Percussion Primers in the fuze family. The delay in the production schedule for M228 Practice Grenade Fuzes in the grenade family is due to problems with automated assembly line equipment. The producer has hired specialized automation experts to debug the equipment and processes and expects to exceed schedule within one year. Future Medium Caliber production is impacted by TDP issues, First Article delays and current yaw problems. Navy Gun ammunition production is delayed due to technical issues with the MK45 Primer, which has not been produced for several years. The overall planned Customer Delivery Index for Rockets is negatively impacted by the intentional delay of HA13 Practice Rockets to allow acceleration of deliveries for the HA12 High Explosive Rockets.

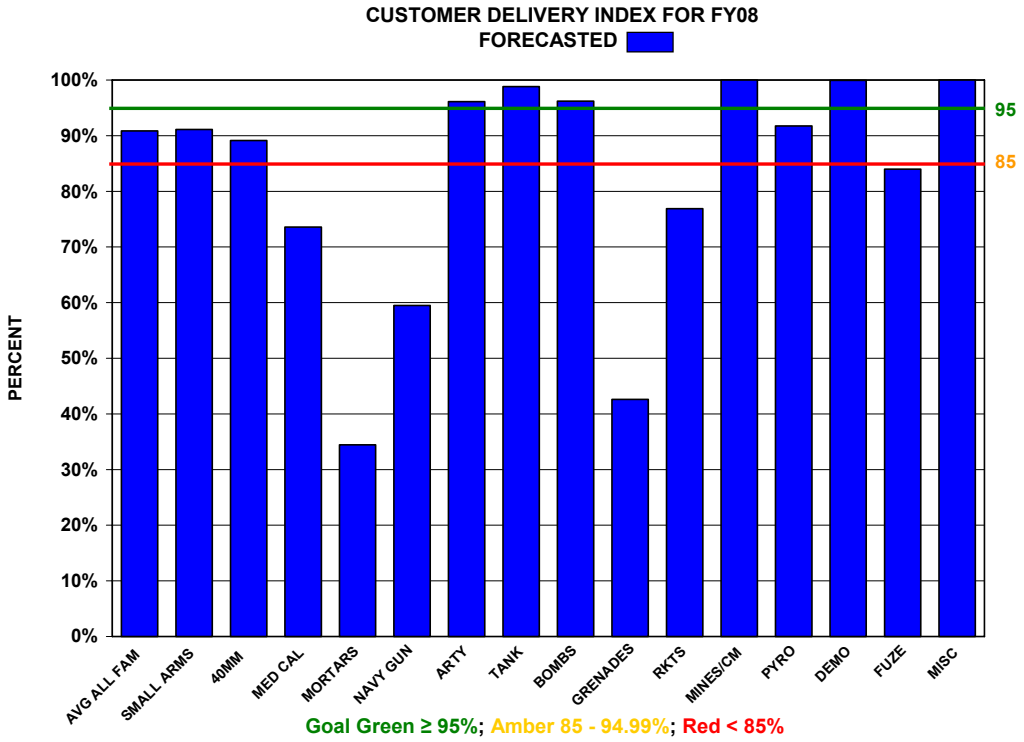


Figure 13

2. SMCA EXECUTOR/FOA SIGNIFICANT ITEMS

A. Safety Critical Characteristics Assessment. The Army Project Manager Combat Ammunition Systems (PM CAS) recognized the need for a comprehensive assessment on its Safety Critical Characteristics (SCCs), managed by its Conventional Ammunition Division (PM CAS/CAD). All existing SCCs within the PM CAS/CAD Technical Data Packages (TDPs) were the result of a combination of factors, to include: different policies, technology capability, and the age of the design.

Using a Lean/Six Sigma effort, comprised of a Black Belt Project and five supporting Green Belt Projects, PM CAS assessed all PM CAS/CAD TDPs' SCC items in terms of the technical rationale for this type of classification. In addition, the teams evaluated the difference between each caliber and payload of ammunition, ensuring consistent classifications across all items.

The categories addressed were:

- Mortar ammunition metal parts
- Mortar ammunition Load, Assemble, and Pack (LAP)
- Artillery ammunition (including metal parts and LAP)
- Fuzes (used on both Artillery and Mortar ammunition)
- Energetics (used on both Artillery and Mortar ammunition)

The Teams assessed 40 specifications to find differences between payload, caliber, or both, within their own categories. This approach identified 500 already existing or potential SCCs. Then they went one step further, comparing Artillery and Mortar applications across the board.

With intensive PM CAS management and oversight, analysis and reviews were performed. A total of 103 were classified as SCCs. The PM CAS and the Army Armament Research, Development and Engineering Center (ARDEC) collective conclusion was these were latent catastrophic failures that could endanger Military Service members. In addition, 33 SCCs within the TDPs were downgraded to Major, and an additional 49 were removed. All of these changes, additions and subtractions are being processed as Engineering Change Proposals (ECPs). PM CAS/CAD's Configuration Management Officer currently facilitates and monitors them until fully integrated into the TDPs. Figure 14 shows the Teams' approach to achieve this conclusion.

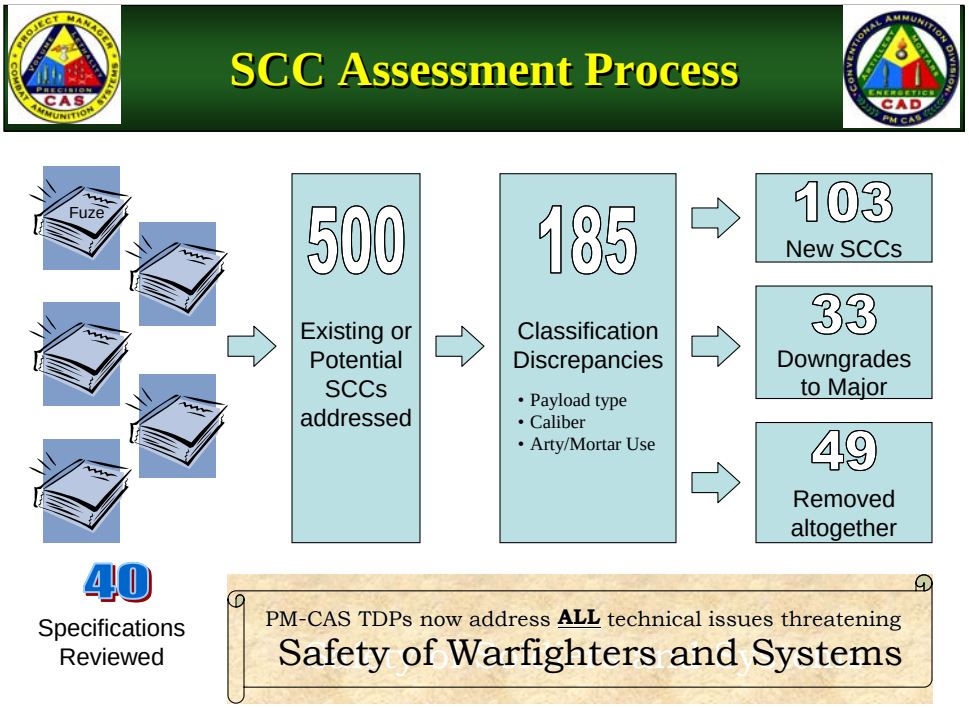


Figure 14

Recognizing the need for a long-term implementation of this effort, PM CAS implemented the following:

- Established a repository of the technical assessments attained by this Lean/Six Sigma effort. This will provide a permanent and retrievable location for future efforts and modifications to TDP content.
- Incorporated TDP changes resulting from the SCC Assessment effort that will be part of the criteria employed by the Product Quality Managers executing verification tasks.
- Develop comprehensive guidance based on this effort as part of the repository and available for future customers.

ANALYSIS: This effort demonstrated the quality improvements that Lean/Six Sigma efforts bring to the warfighter. It provides long-lasting data and methods to continually provide the highest level of assessment.

B. <u>Common Low-cost Insensitive Munitions Explosive (CLIMEx)</u>. PM CAS initiated a program to pursue a Common Low-cost Insensitive Munitions Explosive (CLIMEX) to identify new explosive fills for artillery and mortar applications that are common fills, affordable and less sensitive. The CLIMEX Program strategy was to rapidly accelerate candidate explosive fill formulations/compositions that satisfy the selection criteria into test materiel using representative manufacturing facilities. The program was to capitalize on existing technology and to make a recommendation in a 6 to 12 month timeframe.

Concurrent with the Insensitive Munitions (IM) testing and laboratory characterization testing of the candidates, an evaluation was performed on estimating any investment required to produce these candidates in full production (non-recurring facility costs), to qualify these candidates (non-recurring unique testing/qualification costs), to load projectiles (non-recurring facility modifications and recurring unit cost per pound), and demilitarize the loaded munitions. All assessments included environment impact/remedy considerations. The data supported making the final decision on what candidate(s) to select for qualification testing and subsequent production.

The candidate IM fills were subjected to Shaped Charge Jet Impact (SCJI) tests, considered the greatest threat and challenge to overcome. Both of the IM fills (IMX-101 & IMX-102) successfully passed the Rockeye SCJI test. The reaction level was a Deflagration (type-IV) response that resulted in the projectile breaking-up into three-to-four "large" fragments, along with substantial recovery of unreacted explosives as shown in the figures 15 and 16.

Figure 15

Figure 16

One or more of the candidates will be qualified under an aggressive schedule to achieve full scale production by the end of FY09. When completed and qualified, this technology can be transferred to any item that currently uses TNT. In addition, PM CAS is looking at using this formulation to replace Comp B by making simultaneous item design enhancements that will maintain the lethality of the items.

ANALYSIS: All research, development and engineering testing and evaluation to date has demonstrated an affordable, producible, reliable and environmentally compliant explosive whose performance is equivalent to or better than TNT. Both successful candidates (IMX-101 & IMX-102) are melt castable so existing SMCA facilities can be utilized to load the projectiles.

C. Conventional Ammunition Working Capital Fund (CAWCF) Closure. The CAWCF was a unique working capital fund devised specifically for SMCA procurements from 1982 to 1998. Although the CAWCF closed for new orders at the end of FY98, the SMCA remains responsible for the final billing and closure of all orders that were placed under the fund's purview. The JMC, as the SMCA FOA, retains responsibility for the closure of the CAWCF. The final CAWCF close-out date was 30 September 2007. During FY07, the SMCA FOA accomplished the following for CAWCF closure: financially closed the remaining $15.78M in disposal and service PRON un-liquidated obligations (ULOs), reduced CAWCF inventory from $733K to $0.00 and Government Furnished Materiel (GFM) from $75.57M to $0.00. OUSD issued a consolidated reprogramming request, including the $2.6M CAWCF excess cash balance, to Congress for approval on 7 August 2007. These funds would be reprogrammed from CAWCF to PAA, Production Base Support (PBS), for the Nitrocellulose Production line at Radford AAP.

CAWCF was closed on 30 September 2007. The CAWCF ULO, inventory and GFM are all $0.00 balances. The excess CAWCF cash balance as of 30 September 2007 is $.46M ($3.06M current cash balance less $2.6M reprogramming action) and will be returned to the Treasury Department. The final financial close-out procedures will be performed by DFAS-RI. JMC provided input to the Army Budget Office in support of OSD AWCF budget hearing conducted 20 September 2007.

ANALYSIS: For information only.

D. Summer Price Review. The SMCA FOA hosted the annual Summer Price Review from 17-18 Jul 2007. The review is conducted at the request of the OSD procurement appropriation analyst and is done in lieu of a fall OSD / OMB budget hearing. OSD, Army Budget Office, PEO for Ammunition, Army Program Managers (PM), other Military Service Project Management Offices (PMOs), and JMC commodity teams were in attendance. Briefings were given on the Budget Process, P21 Delivery Schedule, Industrial Base and each PM gave a general overview of the items they manage. The PMs and/or their Commodity Teams briefed the items with a plus or minus 10 percent variance to the hardware price since the 2008 President's Budget. There were approximately 100 items briefed. A decision was made to streamline the budget/pricing process by eliminating one of the three Price Variance Reviews conducted each year. All Military Services agreed it would be more efficient to only review price changes twice a year - once at the Summer Price Review and again before the President's Budget.

ANALYSIS: For information only.

3. MILITARY SERVICE AND O/EDCA SIGNIFICANT ITEMS.

A. SMCA Procurement Steering Council (PSC). The SMCA PSC is a joint Military Service council that reviews SMCA procurement processes and recommends changes to policy, procedures, management and operations for the procurement of conventional ammunition by the SMCA. The PSC operates as an overarching integrated process team (OIPT) and appoints working IPTs (WIPTs) on an ad hoc basis to work specific issues as required. Minutes and

briefing charts to SMCA PSC meetings are posted on the Ammunition Enterprise Portal (AEP) in the PSC Team Room: http://ammoportal.altess.army.mil.

The accomplishments of the SMCA PSC during FY07 include recognition of the need to:

1. Identify lead times for procurement actions involving less than five million dollars.

2. Streamline the receipt and processing of MIPR amendments for minor MIPR adjustments.

ANALYSIS: The SMCA PSC continues to represent a concerted effort to provide a forum for the Military Services to voice procurement-related concerns.

PRODUCTION AND INDUSTRIAL BASE MANAGEMENT

1. METRICS. This category consists of the Production Quality and Industrial Base Adequacy Indices and is comprised of the metrics in Figure 17.

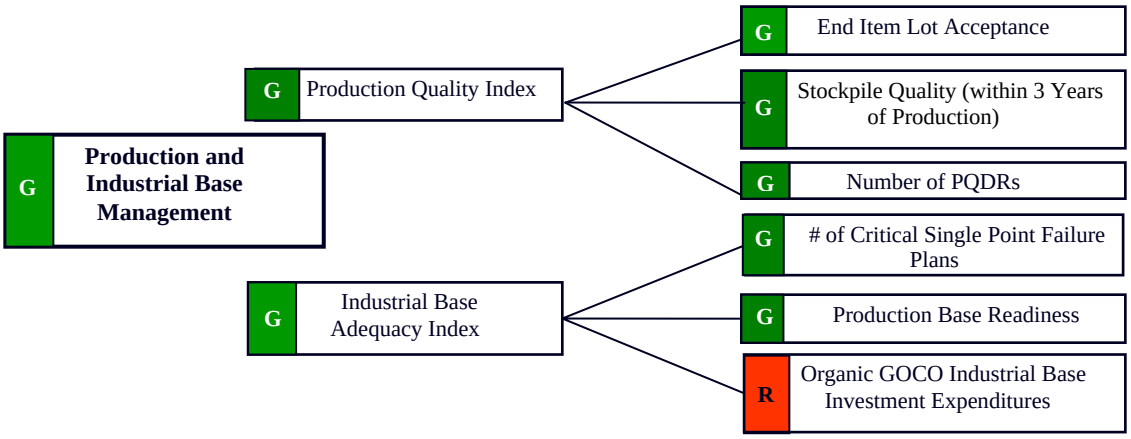


Figure 17

A. Production Quality Index. This index consists of the following metrics and is rated **GREEN** for FY07. For comparative analysis, this index was rated **AMBER** in FY06 and FY05.

1. End Item Lot Acceptance. This metric is intended to calculate the percent of lots that pass initial acceptance tests and constitutes 30% of the weight of the overall production quality index. The source for end item Lot Acceptance Test (LAT) data is the Worldwide Ammunition-data Repository Program (WARP) which is located on the Army Electronic Product Support (AEPS) network. Access to this secure database can be obtained at https://aeps.ria.army.mil/aepspublic.cfm. The data includes LAT testing which is accomplished at Government Proving Grounds and LAT testing which is performed at organic or commercial producers. Rating criteria are as follow: green is 98% acceptance or better; amber is 95% to 97.9%; and red is less than 95%.

ANALYSIS: At 99.3%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (99%) in FY06 and **GREEN** (98.9%) in FY05. FY05 was essentially manually captured data. In early FY06 the web-based system developed as a component of the WARP ammunition data card reporting system was successfully brought online. FY06 data began what should be a steady trend of increasing numbers of lots reported. Continuous out-year data will be more complete as more contracts are written to contain a requirement for producers to upload lot acceptance test reports into the web-based system. Figure 18 shows the number of lots reported and the trend line for lot acceptance. For comparative analysis, a total of 272 lots were reported for FY05; FY06 data showed an increase to 402 lots reported. FY07 lots reported increased to 3260. The percentage of those reported lots which were initially accepted continued a steady upward trend to 99.3%.

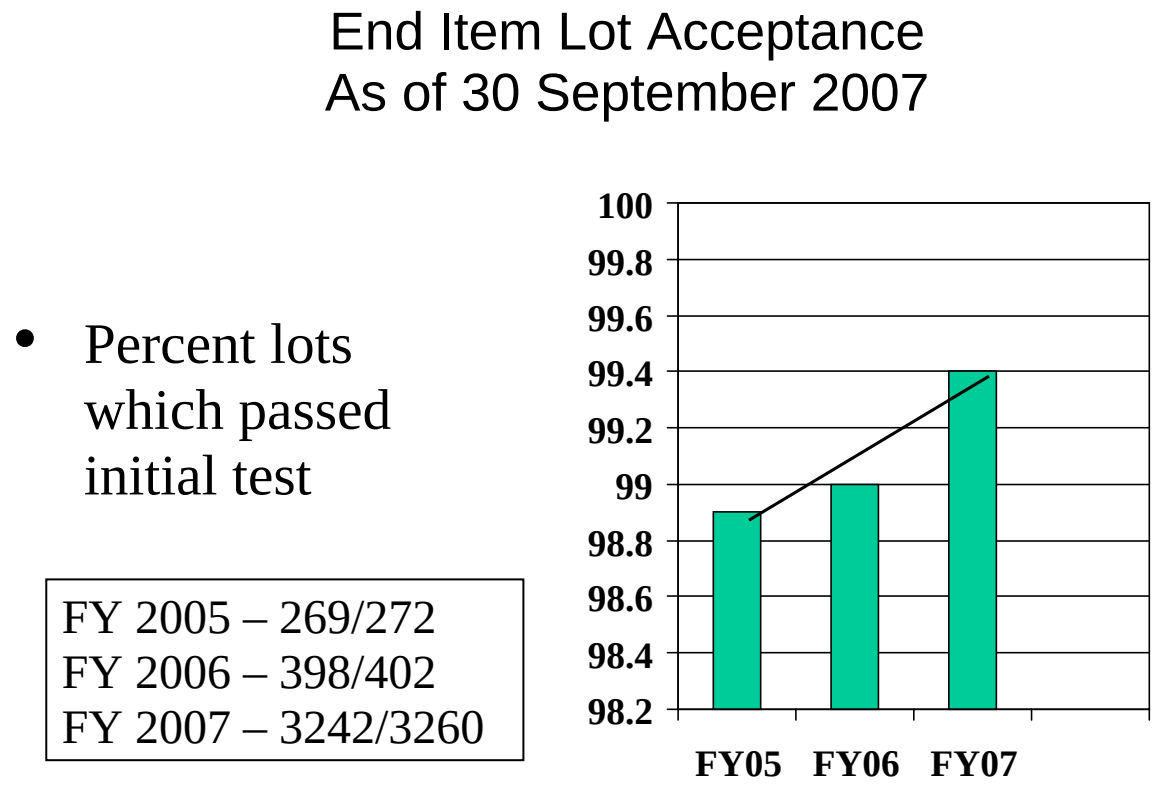


Figure 18

2. Stockpile Quality (Within Three Years of Production). This metric portrays the "quality" of the items in inventory three years after they were produced, and is shown in Figure 19. This metric is weighted as 40% of the Production Quality Index and is arrived at by looking at items produced in a particular year and calculating the percent of the total quantity for each item that has been downgraded to a lower Condition Code. Any three year-old item, not in Condition Code A, most likely has a "Quality issue". These could be defects that were found after delivery of the item, or when it was involved in a malfunction that resulted in downgrading the ammunition. These quality issues could be indicative of either poor production quality by the

manufacturer or poor quality in design. Figure 19 shows, by family, the most recent three year old items (produced in 2004) and the previous year's data (produced in 2001/2002/2003/2004) for trending purposes. The data come from two sources: production data that lists total quantity produced in 2004 for each DODIC and WARS data that shows current Condition Code (three years after production) for the same DODIC. Rating criteria is as follows: green if nine or ten of the families have less than 5% downgraded; amber if two or three families have greater than 5% downgraded or one or more families have greater than 30% downgraded; red if more than four families have greater than 5% downgraded.

ANALYSIS: This metric is rated **GREEN** for FY07 because only one family has greater than 5% of 2004 production downgraded. For comparative analysis, this metric was rated **GREEN** in FY06 because one family showed 8% of 2003 production downgraded. For FY07, the tank family shows 9% of 2004 production downgraded, which was due to 26,000 cartridges of 120MM, M865 that were reclassified to CC-B, restricted from firing below 0°F. The root cause analysis showed that there is a gap at the fin to core interface, missing o-ring, and too much or too little adhesive. All of the other families show <5% of 2004 production downgraded, indicating the stockpile manufactured in 2004 is in a similar condition as originally produced.

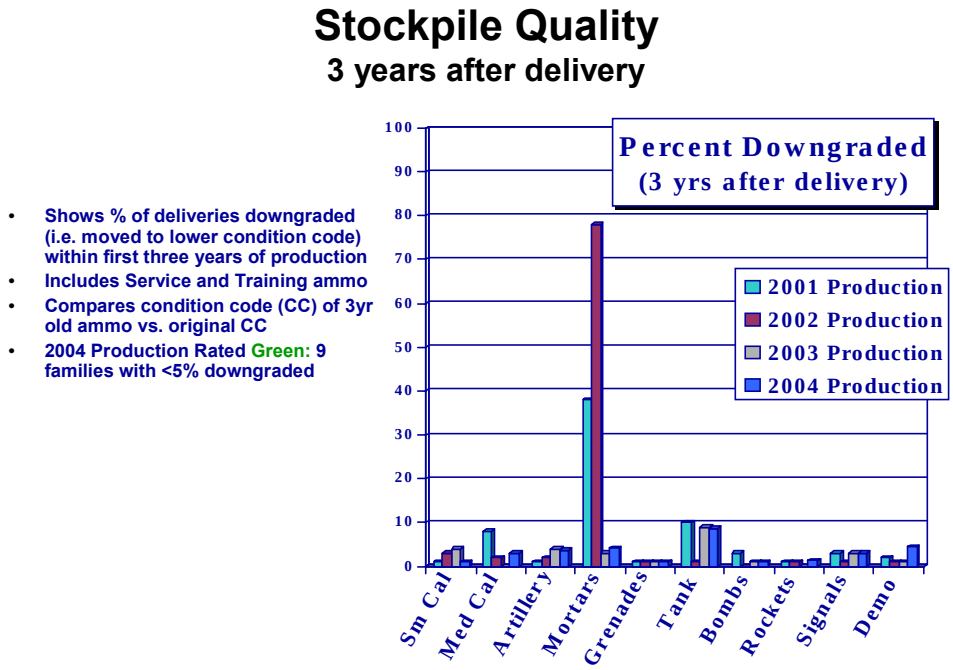


Figure 19

3. Number of Product Quality Deficiency Reports (PQDRs)(KPI). This metric is intended to identify the number of new PQDRs received in an FY and constitutes 30% of the weight of the overall production quality index. The source of the data is the Electronic Deficiency Reporting System (EDRS) which is located on the Army Electronic Product Support (AEPS) network. Data includes all PQDRs generated against two Army PEO AMMO acquisition offices; Joint Munitions Command (JMC) and the Army Armament Research, Development and Engineering Center (ARDEC). Rating criteria uses the prior year as a baseline and are as follow: green is any decrease or up to a 2.5% increase; amber is a 2.6% - 7.5 % increase; and red is a 7.6% or greater increase.

ANALYSIS: This metric is rated **GREEN** for FY07. For comparative analysis, this metric was a data point in FY04, with 103 PQDRs. FY05 included ARDEC PQDRs received at JMC and forwarded to ARDEC. Total ARDEC PQDRs for FY05 was 20. Total JMC PQDRs for FY05 was 101. Rating of red for FY06 was based on FY05 data with 109 & 24 respectively at JMC & ARDEC. FY07 shows a significant decrease in the total number received and the beginning of a different format which will identify PQDRs for lots which are 3 years or older and for those less than 3 years old. Of the 75 JMC PQDRs on newer production, 17 were related to a small caliber traceable seal issue and six were related to medium caliber traceable seal issue.

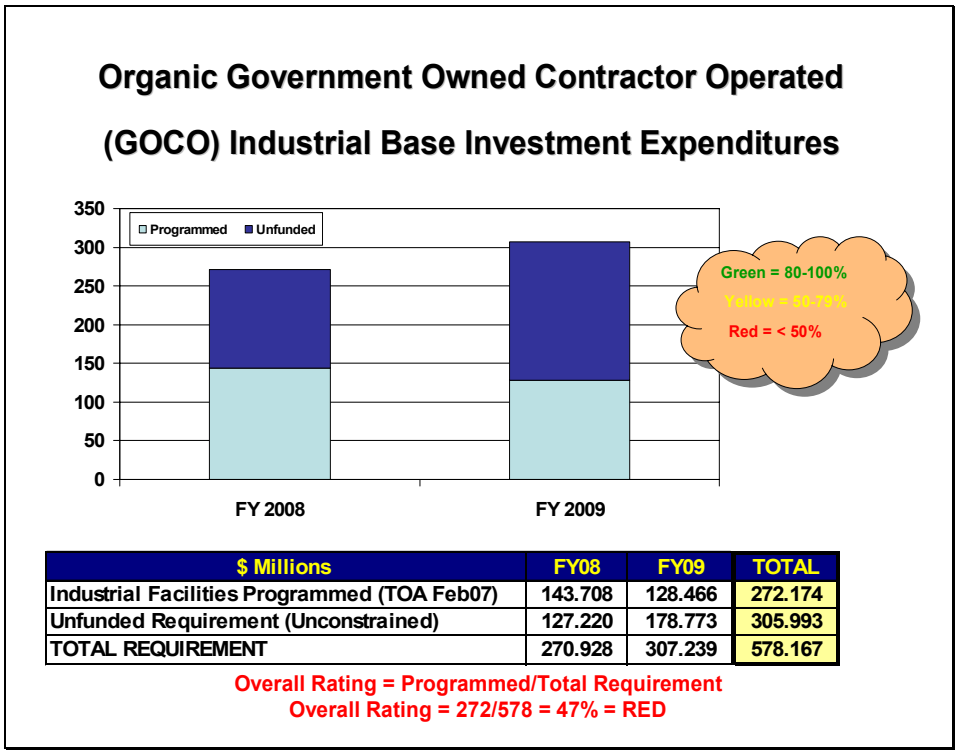
B. Industrial Base Adequacy Index. This index consists of the following metrics and is rated **GREEN** for FY07. For comparative analysis, this index was rated **AMBER** in FY06 and FY05.

1. Number of Critical Single Point Failure (SPF) Plans. This metric represents the number of critical SPFs with mitigation plans that have been developed or funded for development divided by the number of critical SPF mitigation plans required, which in FY07 were 66 plans. This metric is weighted as 33% of the Industrial Base Adequacy Index. Critical SPFs are those single point sources in the ammunition supply chain that pose an unacceptable risk to warfighter missions if they are lost. The source of data for the FY07 metric is the Army Joint Munitions and Lethality Life Cycle Management Command's Single Point Failure IPT. Ownership of SPFs rests with PMs. As SPFs are identified, they are vetted through technical teams and reported to the appropriate PM. The number and kind of SPFs changes over time as the acquisition and production environments change. Technical teams perform sensitivity analyses of existing conditions. Most of the SPFs identified are components to ammunition end items. Rating criteria are as follow: green is 80 – 100%, amber is 50 – 79%, red is less than 50%.
ANALYSIS: At 100%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (100%) in FY06 and **AMBER** (75%) in FY05. The SMCA continues to utilize technical teams to determine the critically of SPFs as they are identified.

2. Production Base Readiness. This metric represents the ability of the production base to meet the FY07 - FY13 Program Objective Memorandum (POM) production demands for ammunition end items, and is weighted as 33% of the Industrial Base Adequacy Index. Source of data is the Industrial Base Assessment Tool (IBAT). The IBAT modeling tool uses stand-alone production rates and blends all end item demands in a given year to create concurrent production rates for each production line. It then time phases each component to determine if the production base can meet the total demand for all items in the FY. Rating criteria are as follow: green is 90 – 100% of all POM end item ratings falling into the green category, amber is 80 – 89% of all POM end item ratings falling into the amber category, red is less than 80% of all POM end item ratings falling into the red category.
ANALYSIS: At 93.4%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **AMBER** (87.1%) in FY06 and **GREEN** (90%) in FY05. The change from FY06 to FY07 was due in large part to more complete data being input into IBAT. This metric was also modified in FY07 by measuring every item rating over every POM year resulting in 1535 ratings in FY07 vs. the 263 ratings in FY06.

3. Organic Government Owned Contractor Operated (GOCO) Industrial Base Investment Expenditures. This metric is 34% of the Industrial Base Adequacy Index. This metric compares the FY08 and FY09 Production Base Support (PBS) President's Budget Submission to support the organic GOCO industrial base with the total requirements identified as needed to support the GOCO industrial base through the same period. Source of data is the PBS program. Rating criteria are as follow: green is 80 – 100%, amber is 50 – 79%, red is less than 50%.

ANALYSIS: At 47%, this metric is rated **RED** for FY07. This is based on an Industrial Facilities Total Obligation Authority for the FY08 – FY09 budgets of $272M against a total program requirement of $578M for the same period. For comparative analysis, this metric was rated **RED** (23%) in FY06 and **RED** (20%) in FY05. An increase to the Production Base Support Program Total Obligation Authority in FY08 – 09 caused this metric to improve in FY07 vs. FY06. This metric originally looked out over the POM (FY07-FY13) but has been changed to only reflect the budget years, which should provide a more actionable metric time frame.



$ Millions	FY08	FY09	TOTAL
Industrial Facilities Programmed (TOA Feb07)	143.708	128.466	272.174
Unfunded Requirement (Unconstrained)	127.220	178.773	305.993
TOTAL REQUIREMENT	270.928	307.239	578.167

Overall Rating = Programmed/Total Requirement
Overall Rating = 272/578 = 47% = RED

Figure 20

2. SMCA EXECUTOR/FOA SIGNIFICANT ITEMS

A. Countermeasure Flares. The SMCA Field Operating Activity's (FOA) Countermeasure Flare (CM) team, through established acquisition strategies, continued to manage the production and delivery of M206, M211, M212, MJU-7, and MJU-10 countermeasure flares to protect Army and Air Force fixed wing and rotary aircraft. The CM Flare team established procedures and processes that allowed contractors to meet vital product delivery schedules to both the Air Force and Army in support of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF)

requirements. Due to aggressive management by the Flare team, sufficient quantities have been established in Theater, allowing assets to be placed in depot rather than being shipped (via airlift) directly from the contractor to Theater. In addition, new shipments to Theater are able to go via surface vessel rather than via costly air transport. The CM Flare team holds biweekly telecons between PM CCS, Army Armament Research, Development and Engineering Center (ARDEC), JMC, Central Command (CENTCOM) and Coalition Forces Land Component Command (CFLCC) to coordinate flare production, requirements, and deliveries.

In FY07 the CM team was awarded the "Packard Award" for their hands-on coordination with contractors to meet the accelerated demand for M211, M212 and M206 flares. The CM team also sponsored a Joint Expendable IPT. The IPT was established to provide a forum in which various PMs (Army, Air Force and Navy), SOCOM and engineering/testing community representatives can meet to exchange information on current and future technologies. The IPT strives for "Jointness" to better leverage resources available for developing technologies that will benefit all Military Services. The Army is currently exploring integration of a newer flare, the XM216, into the inventory. The XM216 has improved performance and increases the survivability of the crew. Currently only Special Operations Army (SOA) is using the flare. The Army and Navy are researching the possibility of integrating the flares into their inventories and are leveraging SOA efforts to validate the XM216 for their use.
ANALYSIS: The Countermeasure Flare team has successfully managed the flare programs to meet the needs of the warfighter.

B. <u>Request from Navy to Redefine/Clarify Existing Defect Codes</u>. In FY07 an issue was brought to the attention of the SMCA FOA Quality Directorate regarding the use of "non-standard" or unauthorized ammunition defect codes. The issue was reviewed and discussed at the Joint Ordnance Commanders Group (JOCG) Quality Assurance (QA) Subgroup meeting, hosted by JMC. The Navy representative requested five new defect codes (currently being used by the Navy) be added to Appendix 5 (Defect Codes) of the Joint Conventional Ammunition Policies and Procedures (JCAPPs). QA Subgroup consensus was to not change defect codes and to form an IPT responsible to determine consistency between the authorized defect codes in Appendix 5 and those listed in individual Military Service supplemental documents. The QA Subgroup will develop and implement a joint process for changing, modifying, or adding defect codes to Appendix 5, as currently no formal joint Military Service policy or process exists. All Military Services were requested to compare their defect codes against the JCAPP Appendix 5. The SMCA FOA's Quality Directorate will lead effort to develop the joint Military Service process for defect code addition, deletion, modification, and will coordinate via the joint IPT.
ANALYSIS: For information only.

C. <u>Small Caliber Ammunition Production</u>. In FY07, the SMCA FOA Small Caliber Division's procurements resulted in production totaling 1.6 billion rounds of conventional ammunition. The primary producers of small caliber ammunition included: Alliant Tech Systems (ATK) / Lake City Army Ammunition Plant (LCAAP), General Dynamics Ordnance & Tactical Systems, Olin Winchester Corporation and Federal Cartridge Corporation. Breakouts of deliveries show SMCA's support in this capacity to the warfighter in Figure 21. Table 2 displays deliveries broken out by family and customer.

ANALYSIS: Overall delivery performance for small caliber ammunition was 98% on time in FY07. As the primary source of small arms ammunition, ATK/LCAAP maintained increased monthly production rates, ensuring timely deliver to customers.

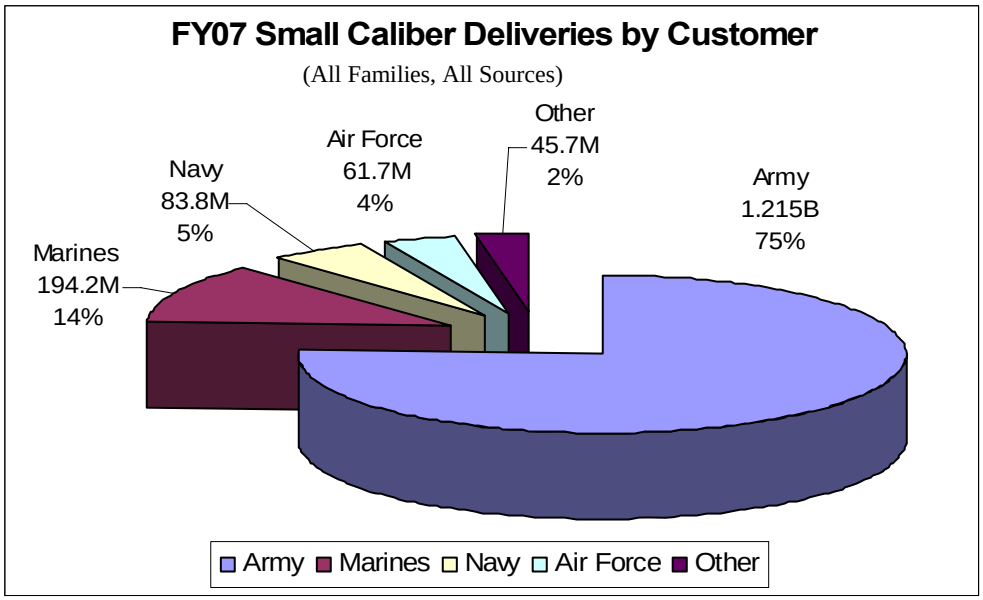


Figure 21

FY07 Total Deliveries by Family & Customer

Customer	5.56mm	7.62mm	.50 Caliber	Other	Total
Army	953,530,360	169,463,800	52,430,000	40,000,500	**1,215,424,660**
Marine	127,367,120	44,720,640	10,071,040	12,054,000	**194,212,800**
Navy	34,741,840	22,483,320	12,465,160	14,080,320	**83,770,640**
Air Force	27,231,800	27,437,860	5,043,200	2,010,000	**61,722,860**
Other Cust	18,464,640	24,201,220	1,268,200	1,768,100	**45,702,160**
Total:	**1,161,335,760**	**288,306,840**	**81,277,600**	**69,912,920**	**1,600,833,120**

Table 2

D. <u>Completing 40MM Legacy Contracts</u>. In FY07, the SMCA FOA's 40MM team, along with smoothing deliveries from the Systems Contract, focused on closing out all legacy contracts, consisting of FY04 and prior programs. "Legacy" contracts (FY04 and prior) are those that utilized a "breakout buy" strategy in that the JMC procured all components separately and assembled the complete rounds at a load plant or facility. A "systems" (FY05 to present) contract is one that utilizes a "systems buy" strategy in that the JMC procures the rounds from a contractor who obtains the required components and assembles the complete round. With the exception of three items, all programs are complete. These items are: the M433 which is delayed due to fuze production issues, the M583 whose deliveries were sporadic due to quality

issues and the M585 which was delayed by a facility fire. The status on each cartridge with rounds to be delivered via "legacy" contracts is listed below:

1. B546 CTG 40MM HEDP M433. Total program quantity is 909K. As of 30 Sep 07, 881K rounds were delivered. This program experienced various fuze and metal parts issues. Improvements are being made to the contractor's material handling, assembly process and inspection equipment to preclude critical defect escapes for future production. FY04 and prior production is expected to complete in Dec 07. The producer is American Ordnance.

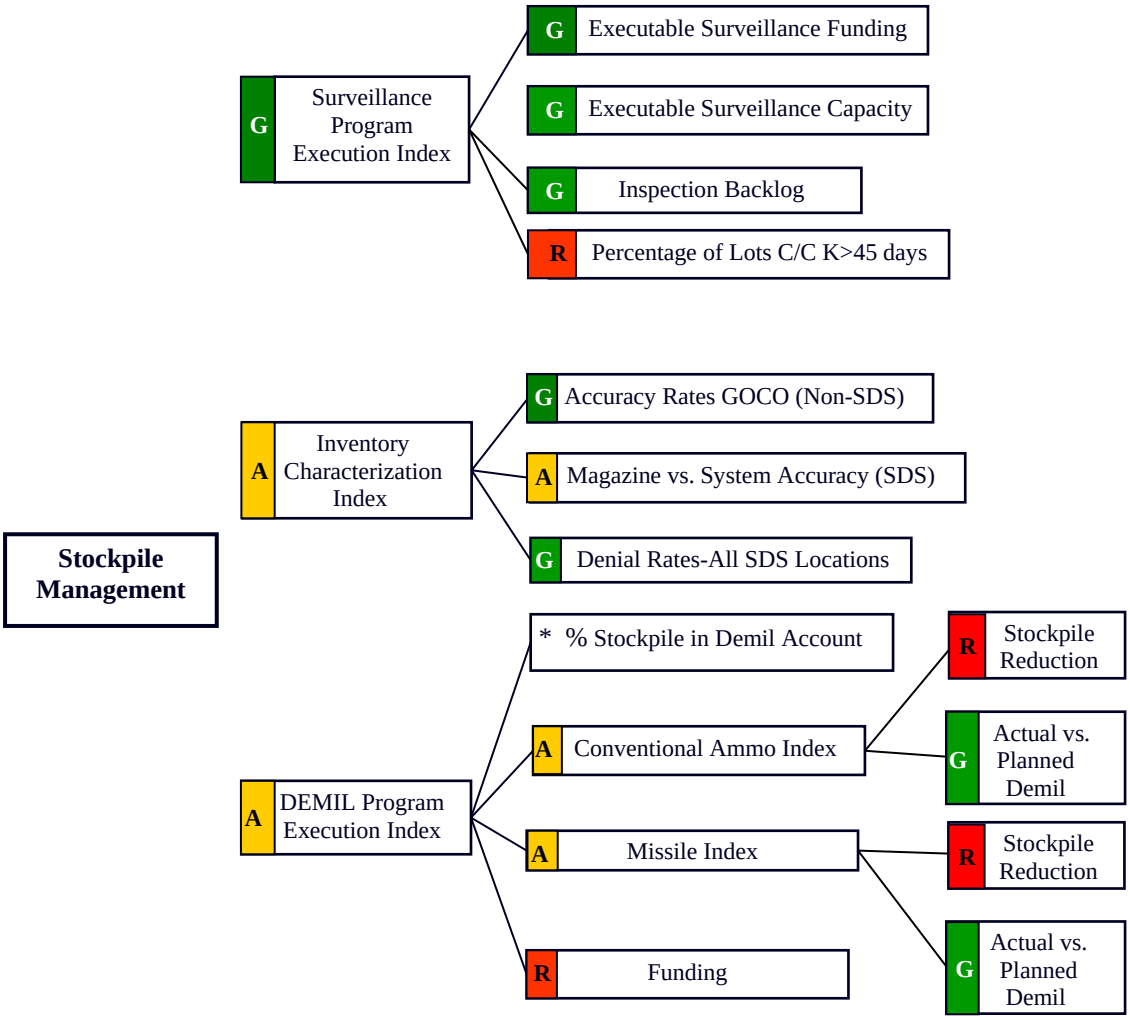
2. B535 CTG 40MM White Star Parachute M583. Total program quantity is 347K. As of 30 Sep 07, 211K rounds were delivered. This producer has experienced production delays due to quality issues and a small magazine explosion. Two quality process audits have identified deficiencies in the contractor's quality process system. Subsequently, a root cause analysis was conducted and corrective actions implemented. Corrective actions addressed lot failures with emphasis on key process characteristic methodology. As a result, production has improved since the time of the audits. The schedule has been adjusted with the remaining total of 136K to be delivered by June 08. The producer is Pyrotechnic Specialties Inc, Byron, GA.

3. B536 CTG 40MM White Star Cluster M585. Total program quantity is 13K. As of 30 Sep 07, 9K were delivered. Valentec, Minden, LA, was in production on the last Lot of B536 White Star Clusters when a massive fire destroyed the entire Production Line. Because of increased demand, the SMCA FOA did not grant a termination for convenience; rather it chose to wait for the remaining production quantity to be produced and delivered. There are 3904 rounds to be delivered in December 07, which will complete this contract.
ANALYSIS: The SMCA continues to work with producers to ensure required ammunition is produced for the customer.

3. MILITARY SERVICE AND O/EDCA SIGNIFICANT ITEMS: There were no significant items to report under this category.

STOCKPILE MANAGEMENT

1. METRICS. This category consists of the Surveillance Program Execution, Inventory Characterization and Demilitarization Program Execution Indices and is comprised of the metrics and indices in Figure 22.



**** Data Point FY07***

Figure 22

A. <u>Surveillance Program Execution Index</u>. This index consists of the following metrics and presents the condition of the SMCA Surveillance program relative to the inventory requirements. This index is rated **GREEN** for FY07. For comparative analysis, this index was rated **AMBER** for FY06 and **RED** in FY05.

1. Executable Surveillance Funding: Required vs. Actual in Dollars. This metric is weighted as 25% of the Surveillance Program Execution Index and compares the required funding vs. total funding received in OMA dollars to conduct the required stockpile surveillance program. Executable is the demonstrated performance "percent" (actual divided by required). Rating criteria are as follow: green is greater than or equal to 90%, amber is 76-89%, red is less than 76%.

ANALYSIS: At 100%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (95%) in FY06, **AMBER** (87%) in FY05 and **RED** (45%) in FY04.

Funding received at beginning of FY07 was 100% of the requirement. In FY06, funding was 60% below requirement and the 95% rating was achievable due to supplemental money provided.

2. Executable Surveillance Capacity: Required vs. Capacity in Dollars. This metric is weighted as 25% of the Surveillance Program Execution Index and compares the required funding vs. the maximum capacity in OMA dollars to conduct the required stockpile surveillance program. Rating criteria are as follow: green is greater than or equal to 90%, amber is 76-89%, red is less than 76%.
ANALYSIS: At 100%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (100%) in FY06, **RED** (75%) in FY05, and **RED** (56%) in FY04. While this metric remains GREEN for the second consecutive year, analysis of information presented at the O/EDCA metrics meeting on 11 Sep 07 indicates a potential concern as the attrition rate of experienced Quality Assurance Specialists (Ammunition Surveillance) (QASAS) may be greater than the ability to hire and train new QASAS.

3. Inspection Backlog. This metric reflects the number of lot/serial number inspections during FY07 as compared to the number of inspections required. This metric is weighted as 15% of the Surveillance Program Execution Index. The goal is based on regular funding scheduled to be received at the beginning of the FY. Rating criteria are as follow: green is greater than or equal to 95%; amber is 90 – 95%; red is less than 90%. Source of data is the Army Joint Munitions Command Strategic Management System.
ANALYSIS: At 110%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (98.4%) in FY06 and **AMBER** (90%) in FY05. The FY07 goal was exceeded due to supplemental funding and 84 QASAS interns reaching journeyperson level.

4. Percentage of Lots in Condition Code K (CC-K) More Than 45 Days. This metric is weighted as 35% of the Surveillance Program Execution Index and measures the number of all Military Service lots at SMCA sites that have been in CC-K for more than the 45 days. CC-K lots are field returns whose true condition is unknown. Inspections must be completed before assets are available for issuance to warfighters. In accordance with Army Regulation 725-50, Requisitioning, Receipt and Issue System, ammunition in CC-K must be classified within 45 days. This metric is expressed as a percentage of all lots in CC-K. Rating criteria are as follow: green is less than 1%, amber is 1-5%, red is greater than 5%. Source of data is the Worldwide Ammunition Reporting System (WARS).
ANALYSIS: At the end of FY07, 41% of the stocks were in CC-K for over 45 days without full inspection being completed, making this metric **RED**. For comparative analysis, this metric was rated **RED** (58%) in FY06, **RED** (60%) in FY05 and rated **RED** (20%) in FY04.

B. <u>Inventory Characterization Index</u>. This index consists of the following metrics and is rated **AMBER** for FY07. For comparative analysis, this index was rated **AMBER** in FY06 and FY05, and rated **RED** in FY04.

1. Inventory/Accountability Accuracy Rates for Government Owned/Contractor Operated (GOCO) Facilities. This metric shows the percent accuracy of the five GOCO depots that are not on the Standard Depot System (SDS) and is graphically shown in Figure 23. This

metric is weighted as 10% of the Inventory Characterization Index. Information for the metric is collected annually. Data source is the stock balance compared to the Commodity Command Standard System (CCSS) stock balance data provided manually by each plant. Initial comparison of the two gives the accuracy percentage. All discrepant NSNs are reconciled and brought into balance by the end of the reconciliation period (usually a one month process). This reconciliation is performed once annually. The Army Materiel Command goal is 95%. Rating criteria are as follow: green is greater than or equal to 95%, amber is 93% - 95%, and red is less than 93%.

ANALYSIS: At 97.3%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **AMBER** (94.5%) for FY06, **RED** (85%) for FY05 and **RED** (88.5%) for FY04. Improved reporting procedures for daily transactions by the facilities resulted in more timely and accurate posting to CCSS.

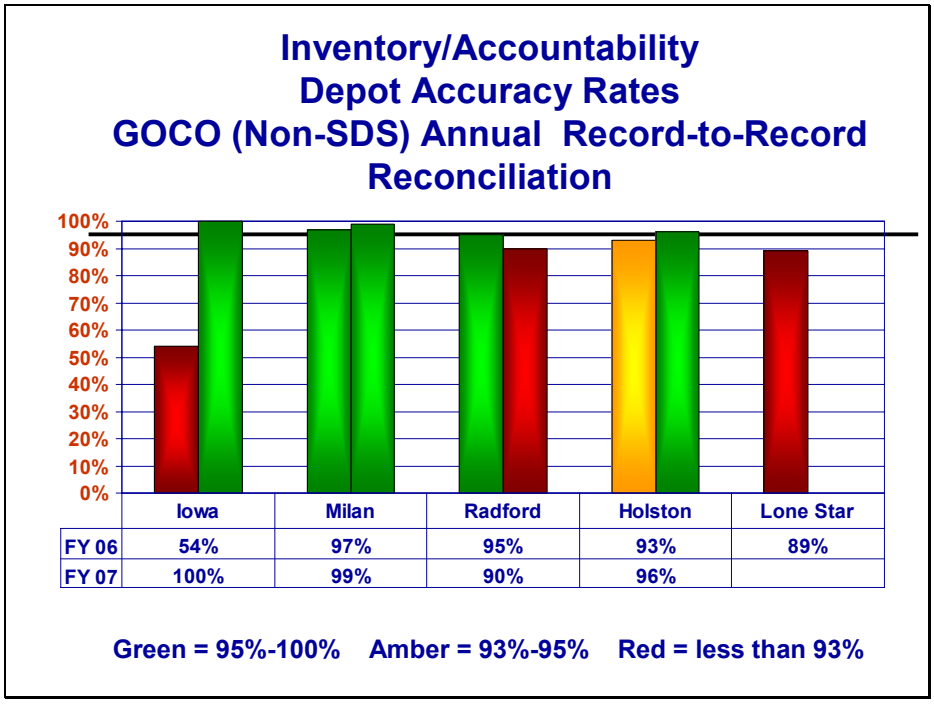


Figure 23

2. Magazine vs. System Accuracy for SMCA Depots (KPI). This metric is weighted as 85% of the Inventory Characterization Index and depicts two processing areas: Floor to Custodial and Custodial to Accountable. The Floor to Custodial is depicted in figure 24 and is conducted at the depot and measures the depots inventory count accuracy; i.e. total grids against the number of memo adjustments. The Custodial to Accountable is depicted in figure 25 and measures the accuracy between the custodial record at the depot and the accountable record at JMC; i.e. the number of records submitted against the number of record discrepancies. Sites included are Anniston Munitions Center (ANMC), Blue Grass Army Depot (BGAD), Crane Army Ammunition Activity (CAAA), Hawthorne Army Depot (HWAD), Letterkenny Munitions Center (LEMC), McAlester AAP (MCAAP), Red River Munitions Center (RRMC), Sierra Army Depot (SIAD) and Tooele Army Depot (TEAD). The source of data is SDS and CCSS. Rating

criteria are as follow: green is greater than or equal to 99%, amber is 98 to 99%, red is less than 98%.

ANALYSIS: At 98.8%, this metric is rated **AMBER** for FY07 and is comprised of Floor to Custodial portion at 99.3% and Custodial to Accountable at 98.3%. For comparative analysis, this metric was rated **AMBER** (98.5%) in FY06, **AMBER** (98.4%) in FY05 and **AMBER** (98.2%) in FY04. The upward trend in the Floor to Custodial part of this metric is attributable to the completion of 100% inventories in consecutive years and SMCA FOA Supply Depot Operations (SDO) assessments at the sites. The Custodial to Accountable part of this metric is **AMBER** because of personnel turnover and limited knowledge base of new personnel.

RECOMMENDATION: That the SMCA FOA continues to use both Command and SDO assessments at the sites, as both assessments will result in continued emphasis, training and improvement in inventory accuracy.

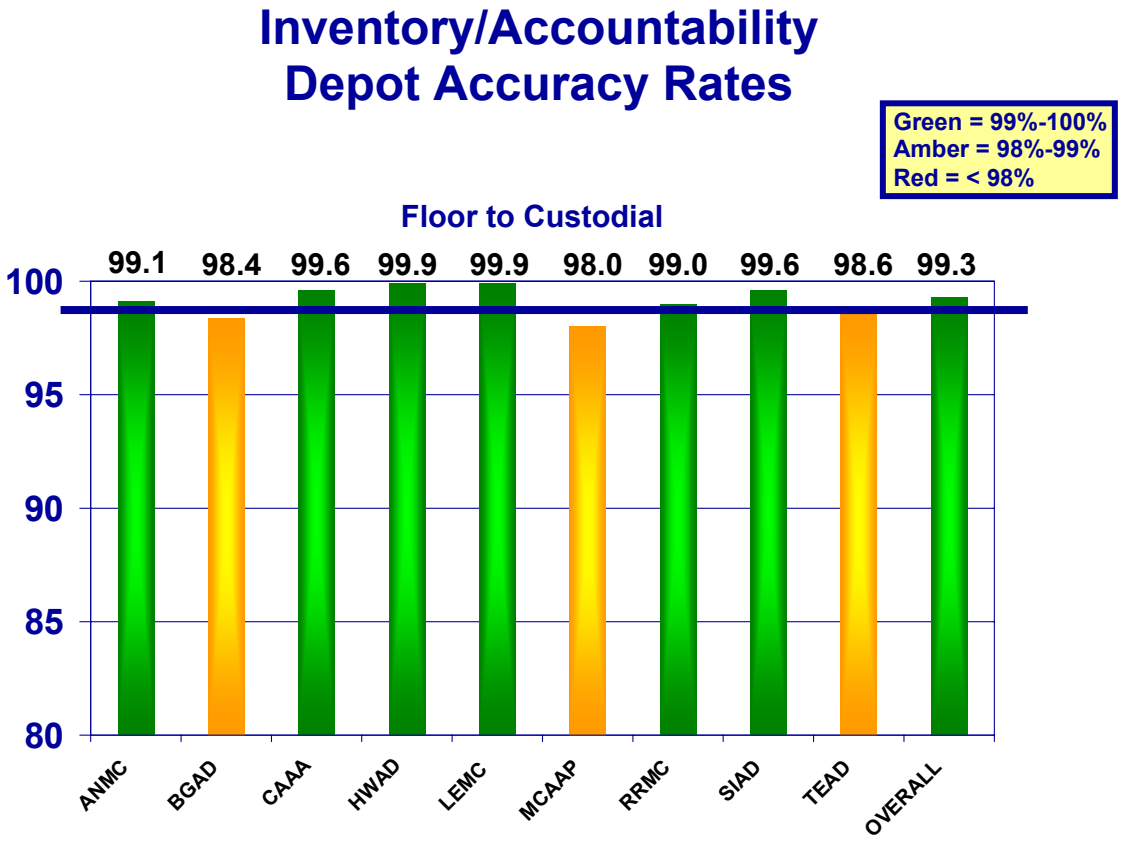


Figure 24

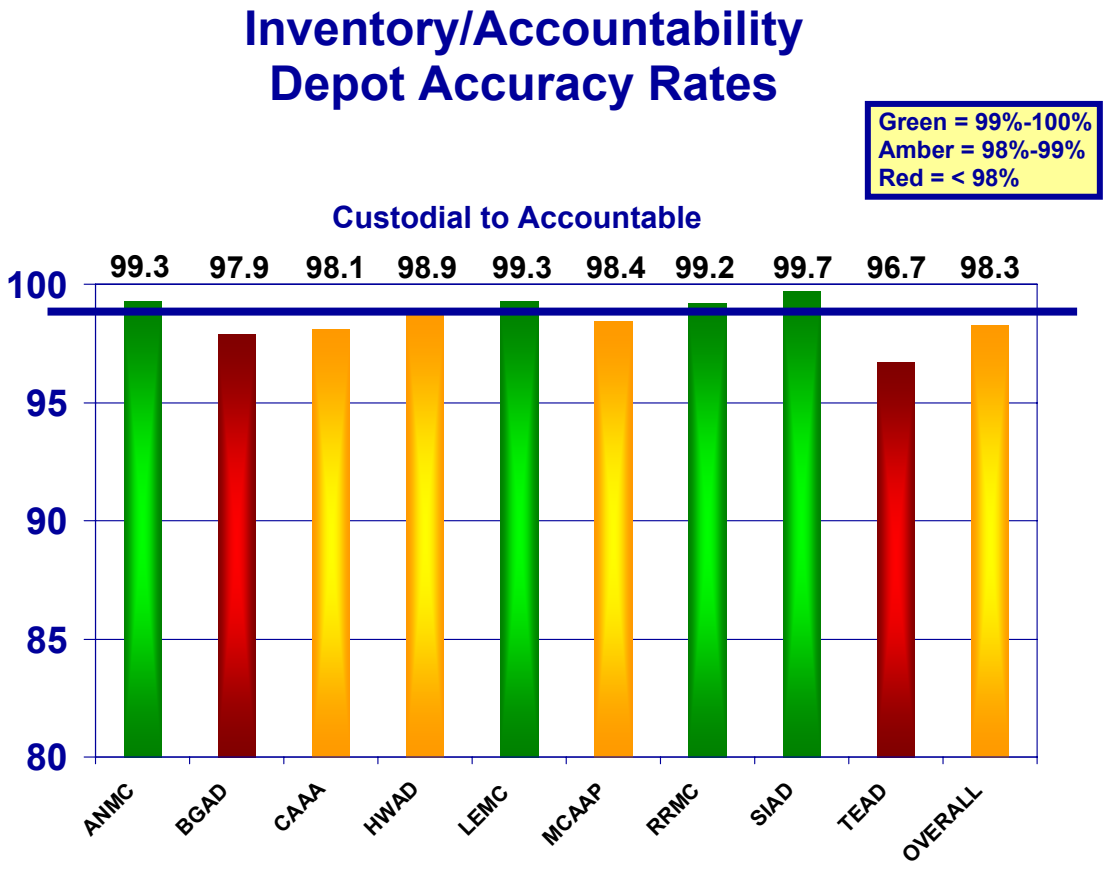
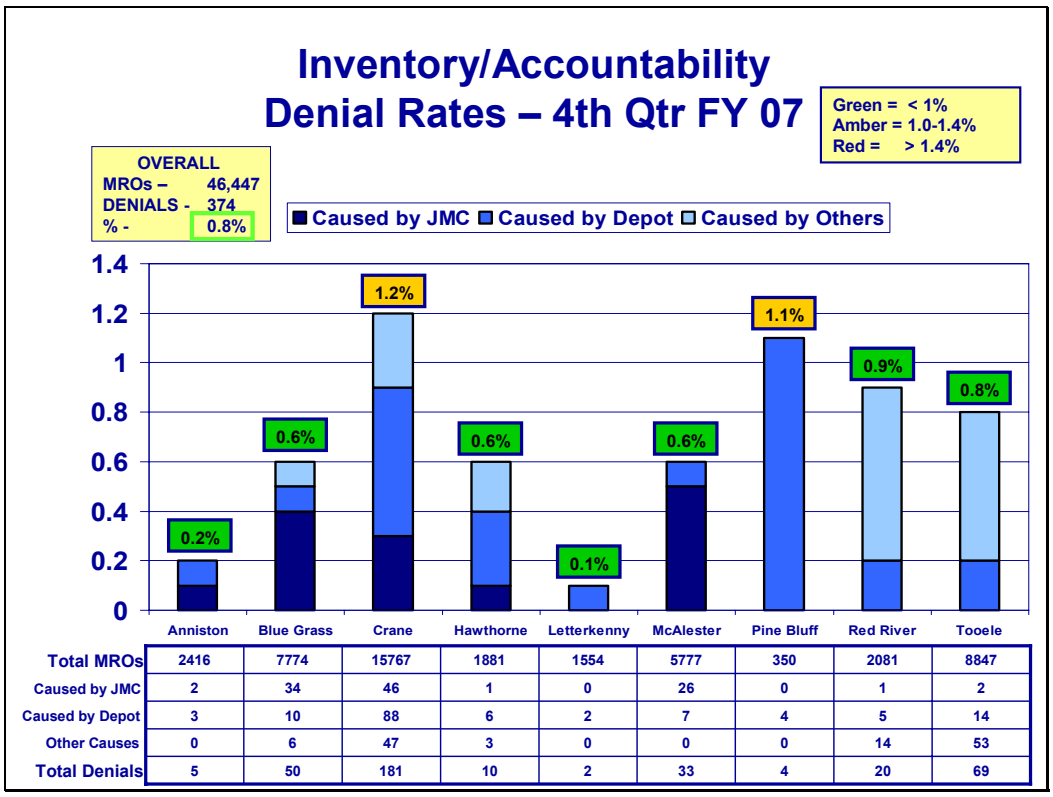


Figure 25

3. Denial Rates for all SDS locations. The metric is the ratio of the number of Material Release Orders (MROs) received compared to the number of qualified denials, and is weighted as 5% of the Inventory Characterization Index. A denial is defined as a notification from a distribution activity advising the originator of an A5 MRO or a MRO (excluding A5J Disposal Release Orders) of failure to ship all or part of the quantity originally directed for shipment. Data source is SDS for each depot. The Army Materiel Command goal is denials will not exceed 1%. Rating criteria are as follow: green is less than or equal to 1%, amber is 1 – 1.4%, red is greater than 1.4%.

ANALYSIS: At 0.8%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (0.9%) in FY06, **AMBER** (1.14%) in FY05 and rated **RED** (2.28%) in FY04. The improvement in this metric is attributable to the completion of 100% inventories in consecutive years and the Supply Depot Operations (SDO) assessments that the SMCA FOA has completed. For sites where performance is rated amber or red, the SMCA FOA assesses the site's corrective action plan and visits the site for follow up on corrective actions taken.



	Anniston	Blue Grass	Crane	Hawthorne	Letterkenny	McAlester	Pine Bluff	Red River	Tooele
Total MROs	2416	7774	15767	1881	1554	5777	350	2081	8847
Caused by JMC	2	34	46	1	0	26	0	1	2
Caused by Depot	3	10	88	6	2	7	4	5	14
Other Causes	0	6	47	3	0	0	0	14	53
Total Denials	5	50	181	10	2	33	4	20	69

Figure 26

C. <u>Demilitarization (Demil) Program Execution Index</u>. This index is rated **AMBER** for FY07 and consists of: the percent of stockpile in demil account data point, conventional ammunition and missile indices, and demil funding. For comparative analysis, this index was rated **AMBER** in FY06.

1. Percent of Stockpile in Demil Account. This data point shows the percent of stockpile; in short tons; at SMCA installations that is in the demil account.
ANALYSIS: At the conclusion of FY07, 25% of the stockpile at SMCA locations was in the demil account. For comparative analysis, in FY06, 22.4% of the stockpile at SMCA locations was in the demil account.
ANALYSIS: A sizeable portion of available storage space at SMCA locations is devoted to demil stocks, impacting the efficiency and effectiveness of depot operations.

2. Conventional Ammunition Index. This index uses the following metrics to measure the performance of conventional ammunition demil and is weighted as 75% of the Demil Program Execution Index. For FY07 this index is rated **AMBER**. For comparative analysis, this index was rated **GREEN** in FY06.

a. Stockpile reduction. This metric shows the change in the conventional ammunition demil stockpile from the beginning of FY07 to the end of FY07, and is weighted as 50% of the Conventional Ammunition Index. Rating criteria are as follow: green is stockpile decrease of 6% or more from previous year, amber is no growth up to a reduction in stockpile of

less than 6% in the demil stockpile, and red is any stockpile increase from the previous year.
ANALYSIS: With a 6.9% increase in FY07, this metric is rated **RED**. For comparative analysis, this metric was rated **GREEN** (1.05% decrease) in FY06 and **RED** (12.4% increase) in FY05. The increase in FY07 was due primarily to greater than anticipated generations of the 155MM DPICM, M483, which contributed approximately 1.2 million rounds; or a tonnage of over 65,390 tons; to the demil stockpile.

b. Actual vs. planned demil. This metric measures the actual vs. planned demil completed in FY07, and is weighted as 50% of the Conventional Ammunition Index. Rating criteria are as follow: green is greater than or equal to 90%, amber is less than 90% and equal to or greater than 80%, red is less than 80%.
ANALYSIS: With demil accomplishments of 120.14%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (141.34%) in FY06 and **GREEN** (104.2%) in FY05. The major contributors to the unplanned accomplishments were the unforeseen and urgent site remediation efforts dealing with demil of materials associated with Talon Manufacturing Company in West Virginia and abandoned materials with TPL, Inc. in New Mexico.

3. Missile Index. This index uses the following metrics to measure the performance of Army missile demil. It is weighted as 15% of the Demil Program Execution Index, based upon level funding. For FY07, this index is rated **AMBER**. For comparative analysis, this metric was rated **AMBER** in FY06.

a. Stockpile reduction. This metric shows the change in the missile demil stockpile from the beginning of FY07 to the end of FY07, and is weighted as 50% of the Missile Index. Rating criteria are as follow: green represents a stockpile decrease of 6% or more from the previous year, amber represents no growth in the demil stockpile up to a reduction in stockpile of less than 6%, and red represents any stockpile increase from the previous year.
ANALYSIS: With an increase in stockpile of 17.4%, this metric is rated **RED** for FY07. For comparative analysis, this metric was rated **RED** (14.4% increase) in FY06 and **GREEN** (8.4% decrease) in FY05. The beginning missile stockpile quantity for FY07 was 318,382 and the ending FY07 quantity was 373,780.

b. Actual vs. planned demil. This metric measures the actual vs. planned demil completed in FY07, and is weighted as 50% of the Missile Index. Rating criteria is as follows: green represents when actual demil is greater than or equal to 90% of planned, amber represents when actual demil less than 90% of planned but equal to or greater than 80%, and red represents when actual demil is less than 80% of planned.
ANALYSIS: At 102% of the planned demil actually completed, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** for FY06 (97.5%) and **RED** (64.9%) for FY05.

4. Demil Funding. This metric shows the amount of funding received against the estimated amount required to reduce the stockpile by 6% annually while keeping pace with demil generations, and is weighted as 10% of the Demil Program Execution Index. Rating criteria are

as follow: green is achieving a stockpile reduction of 6% or greater; red is achieving less than a 6% stockpile reduction.
ANALYSIS: Funding for conventional ammunition demil did not achieve the 6% goal and is rated **RED** for FY07. For comparative analysis, this metric was rated **RED in** FY06 and **RED** for FY05. In order to achieve the 6% goal, $166.4M was needed in FY07. However, due to higher priorities within the Department of the Army, only $93.8M was funded.

2. SMCA EXECUTOR/FOA SIGNIFICANT ITEMS

A. Screening of Suspended Lightweight 30MM HEDP Cartridges. Screening of suspended M789 assets was initiated in June 2007 at Radford Army Ammunition Plant (RFAAP) due to a shortage of M789 Lightweight (LW) 30MM High Explosive/Dual-Purpose (HEDP) Cartridges required to support the Apache Helicopter mission in southwest Asia (SWA). Approximately 136K M789 Cartridges, suspended and reclassified as Condition Code "J" (suspended-in stock), were delivered to the ATK New River Energetics facility located on RFAAP. These rounds came from five cartridge lots assigned CC-J due to reports of in-bore detonations during use in SWA. Based on knowledge gained from the LW 30MM In-bore/Hang-fire Investigation Team (IHIT), ATK conducted a visual inspection of the cartridges, screened them via x-ray for fuze defects and foreign materiel in the projectile, and then obtained ballistic performance data based on firing a ninety round sample from each lot. This information was reviewed/approved by the appropriate government staff. Cartridges passing all tests were repacked, reclassified as CC-C materiel (serviceable-priority issue), and shipped back to SWA in late 4th Qtr FY07. Of the 135,923 cartridges screened through this program, 118,066 serviceable cartridges were returned to SWA, 1,237 cartridges were rejected for visual defects, 231 cartridges failed to pass x-ray inspection, and 15,937 cartridges were withheld pending a PM MAS disposition decision.
ANALYSIS: For information only.

B. Ammunition Data Cards (ADCs) Suffixes/Missing ADCs. Military Standard (MIL-STD) 1168B, Ammunition Lot Numbering and Ammunition Data Cards, delineates Military Service requirements for ammunition lot numbering and ammunition data cards (ADCs). Currently, all Military Services are not consistently adhering to the MIL-STD requirements with regards to ammunition lot suffixing and the process for preparing an ADC for a suffixed lot. The ADC is the ammunition "birth certificate" and all modification, renovation and rework must be documented. MIL-STD-1168B (currently under revision) requires the use of "alpha" character suffixes on lots of ammunition which have been reworked. The SMCA FOA's Quality Directorate initiated a Lean/Six Sigma Green Belt project to develop suggestions for revisions to the standard.
ANALYSIS: If ADC's are not prepared for all suffixed lots determinations of serviceability are greatly impaired; therefore, potentially impacting munitions readiness posture for all Military Services.

C. Accountability/Storage.

1. During FY07, as the SMCA FOA, the JMC participated in four Command Assessments and two Supply Depot Operations (SDO) assessments at various SMCA sites.

During the assessments, five functional areas (receipt, storage, inventory, shipment/issue, Automatic Identification Technology) and approximately 30 processes were reviewed at each site. The SMCA sites included Anniston Munitions Center (ADMC), Blue Grass Army Depot (BGAD), Crane Army Ammunition Activity (CAAA), Hawthorne Army Depot (HWAD), Letterkenny Munitions Center (LEMC), and Tooele Army Depot (TEAD).

2. In FY07, depots were funded to perform a 100% physical inventory to assure the physical count of ammo in storage matches what is shown on the depot's custodial records. Sites funded were ADMC, BGAD, CAAA, HWAD, LEMC, MCAAP, RRMC, and TEAD. All sites completed the 100% physical inventory and all associated research by 30 Sep 07. With over 3,000 discrepancies corrected, improved accountability will facilitate all processes at the shipping activities. Accurate accountability should eliminate the time and energy spent searching for ammunition, which will ultimately ensure on time delivery to the warfighter.
ANALYSIS: For information only.

D. Re-establishment of SMCA Storage Complex Baseline. The SMCA FOA conducted a Lean/Six Sigma Green Belt project to review and update the baseline for the SMCA storage complex. The primary thrust of the project was to provide accurate, complete, and concise, storage data for management and personnel to use in making sound storage decisions. The existing reporting system did not fully comply with Army Regulation (AR) 740-1, 09 Sep 02, Logistics – Storage and Supply Activity Operations, and contained a 75 percent reporting discrepancy. This discrepancy was attributed to inaccuracies in each site's covered ammunition storage occupancy level. The project's implementation and execution revised the storage posture reporting process for full compliance with AR 740-1, and provided an accurate covered ammunition storage baseline. Each primary storage site reports its Gross Square Feet, Net Square Feet (NSF) available for storage, occupied NSF available for storage, vacant NSF available for storage, and storage occupancy data in accordance with AR 740-1. As a result, an AR 740-1 compliant monthly reporting process has been established and implemented. In addition, management controls have been established and will be assessed during future SDO reviews.
ANALYSIS: The improved reporting process provides a management tool in which to make data driven storage decisions, ultimately ensuring that assets are aligned with customer requirements.

E. Munitions History Program (MHP) - Incorporation of Navy and Air Force Suspension Systems. The SMCA FOA is the primary proponent of the Munitions History Program (MHP). MHP is an internet based application that collects and maintains inspection, test & and other lot/serial information to determine munitions condition and issue status. The end state of MHP will integrate or merge with the following systems: Ammunition Surveillance Information System (ASIS), Joint Hazard Classification System, Global Combat Support System-Army (GCSS-A), Logistics Management Program (LMP), Ammunition Data Cards (ADC), Munitions Suspense/Restriction System, Malfunction Reports from the Army Aviation and Missile Command and JMC, and Ammunition and Missile Information notices. Currently the MHP focus is primarily Army stocks, with the long term goal of capturing and sharing data for/with all Military Services. A Joint MHP concept was briefed at the August 2007 JOCG Quality Assurance Subgroup meeting. The Military Service representatives were tasked to

solicit input from their organizations' POCs/Leads and report back to the QA Subgroup during the next regularly scheduled Subgroup meeting (spring of 2008). If the Subgroup principal members concur with a Joint MHP concept, an implementation plan (with actionable milestones) will be developed. DoD-wide benefits highlighted include: improved data input; timeliness; and increased reliability through proper ammunition classification.
ANALYSIS: For information only.

F. Integrated Logistics Strategy (ILS).

1. As the SMCA's FOA, the JMC embarked on an Integrated Logistics Strategy (ILS) in July 2006. The ILS is a strategy that allows continual assessment of the operating environment and charting of strategic direction based on environmental changes. The ILS looks to achieve an optimum balance among Inventory, Warm-base, and Outload elements. An unbalance among these three elements causes the incurrence of risks and inefficient operations. The ILS team is comprised of munitions logistics functional Subject Matter Experts (SMEs) from each Military Service and munitions wholesale operations SMEs.

2. Three major strategies are contained in the ILS Framework – Depot Network Strategy, Positioning Strategy, and Transition Strategy.

a. Depot Network Strategy focuses on achieving the optimum size (number of installations) and capabilities by considering Regional Optimization, Outload Capacity, and Storage Capacity. The Depot Network Strategy also addresses the unique capabilities required for retention to support ammunition logistics.

b. Positioning Strategy focuses on specific installation storage of required DODICs and quantities to optimally support recurring warfighter training and time-phased contingency outloading requirements.

c. Transition Strategy moves from the current state to desired optimal Network/Positioning by addressing imbalances. Each misalignment – demand, space or capability – that is addressed and/or corrected has workload implications for the installations.

3. In FY07, ILS was responsible for enhancing the overall SMCA ammunition enterprise capabilities through properly positioning misaligned items. Conversely, the improved positioning of SMCA materials has better balanced the enterprise storage footprint by relieving strained storage postures at particular locations. All JMC locations are now better suited to support SMCA mission requirements.

4. To support the ILS network, positioning, and transition strategies, the JMC obligated $45.6M in storage projects which are estimated to return 1.1M net square feet (NSF) for storage use. The installations have (and will continue to) accomplish this through off-post shipments and asset re-warehousing/consolidation. As of 30 Sep 07, completed projects have created 233,965 NSF for storage at Blue Grass, Tooele, and Pine Bluff Arsenal.

5. A variety of Lean/Six Sigma projects have been initiated to support the ILS implementation. Those completed in FY07 include:

a. Storage Data Accuracy. The primary goal of this Lean/Six Sigma Green Belt project was improving the reporting of accurate, complete, and concise storage data. The reporting improvement allows for improved storage decisions. A more accurate storage occupancy level was achieved through the use of a more consistent approach and methodology. The JMC utilized the new baseline in the ILS Network Strategy - Storage Capacity analysis. Data driven decisions were made for positioning and transitioning misaligned assets, field returns, and retrograde (forecasted and unforecasted). Proper positioning (best site determination and on-post storage location accuracy) improves readiness by ensuring requisitioned assets are readily available and distributed to the warfighter in an efficient and timely manner.

b. Army Working Capital Fund (AWCF) Budget/Pricing. A JMC Lean/Six Sigma Green Belt project was initiated to determine the accuracy of installation indirect costs in both the JMC AWCF Budget, and the JMC Rates and Prices system. The goal was to reduce cost variation between the systems, and streamline the overall process cycle time, both at HQ, JMC and installations. The Green Belt team determined that two of the major causes of the deltas in indirect costs were the lack of recent written cost definitions, and a lack of recent pricing training materials. Through material updates and improvements in the automated pricing system, the spring 2007 pricing pilot session showed a reduction in variation of 14% over the baseline, while the fall 2007 pricing session is showing a nearly 100% reduction in variation. A total of 76 hours and $4K were validated as cost avoidance. Intangible benefits included improved confidence in the JMC AWCF rates, and improved accuracy for the ILS Regionalization Fixed Cost project.
ANALYSIS: The ILS initiative provides optimal integrated warfighter stockpile and logistics solutions.

G. Data Sharing – Logistics Readiness. In FY07 the SMCA FOA hosted an Outloading Capability Study. Representatives from each Military Service and the Joint Chiefs of Staff J-4 participated. The goal of the study was the determination of munitions time-phased outloading requirements. The study considered issues including common methodology, best source of requirements data, application of OCONUS and PREPO assets, and Military Service unique requirements. Military Service specific requirements have been identified and submitted to JMC for processing through the Ammunition Distribution System. This modeling system will identify munitions shortfalls and the need for suitable substitutes. The modeling analysis is expected to be available for review by 28 November 2007. Once available, the analysis results will be utilized to further analyze the impacts on the outloading capabilities at JMC facilities.
ANALYSIS: For information only.

3. MILITARY SERVICE AND O/EDCA SIGNIFICANT ITEMS

A. Ammunition Stratification and Cross-Leveling.

1. The O/EDCA continued in its role as defined in DoDI 4140.1-R and JCAPP 5, by serving as the lead for the annual Quad Service Cross-Leveling and Stratification in March 2007.

The sponsors of this annual review are the Office of the Under Secretary of Defense (Acquisition, Technology and Logistics)/Defense Systems/Land Warfare and Munitions [OUSD (AT&L)/DS/LW&M] and the Deputy Under Secretary of Defense (Logistics and Materiel Readiness). The primary focus of the cross-leveling is to review ammunition long supply in the Military Services' Class V stratification reports as compared to planned procurements. Stratification is an annual process that assesses the adequacy of the ammunition inventory to meet stated requirements and ensures that assets above the requirements are retained only if warranted. This process optimizes the DoD ammunition posture, avoids unnecessary procurements, and prevents unnecessary demilitarization. The preliminary review allows each Military Service to identify potential cost avoidances in its budget by receiving, as free issue, ammunition that had been previously identified as long supply inventory in other Military Services' annual stratification reports. Policies and guidance for stratification and cross-leveling are contained in Chapter 9 of DoD 4140.1-R, DoD Supply Chain Materiel Management Regulation, with more detailed procedures contained in JCAPP 5.

2. At the March 2007 meeting, 90 primary Department of Defense Identification Codes were reviewed. As a result of the QSR, the Military Services tentatively agreed to cross-level assets resulting in $5.8M of potential cost avoidance to their FY09 budgets and $27.3M in other years for items listed in the SMCA Integrated Conventional Ammunition Procurement Plan (ICAPP). During the open discussion at the end of the meeting, cross-leveling discussions for items not listed in the ICAPP presented a cost-avoidance potential for roughly $38.6M. The value of items in the ICAPP reflects procurement cost, whereas items not listed in the ICAPP reflect inventory value. Final FY07 cross-leveling transactions resulted in ammunition transfers between the Military Services valued at $25.2M. Of that, $2.53M was for SMCA-assigned items planned for procurement in FY09 as shown in Figure 27. The remaining $22.7M consisted of SMCA items planned for procurement in FY10-FY12 or non-SMCA assigned items, and is depicted in Figure 28.

ANALYSIS: The annual Quad Service Cross-Leveling and Stratification efforts have been beneficial for the Military Services. Total cost avoidance from its inception in 1997 through FY07 has been $297.3M in the target years. This was at a cost of less than $.4M per year; based on time and labor estimates provided by the Military Service representatives, and using a 2.5 factor for overhead.

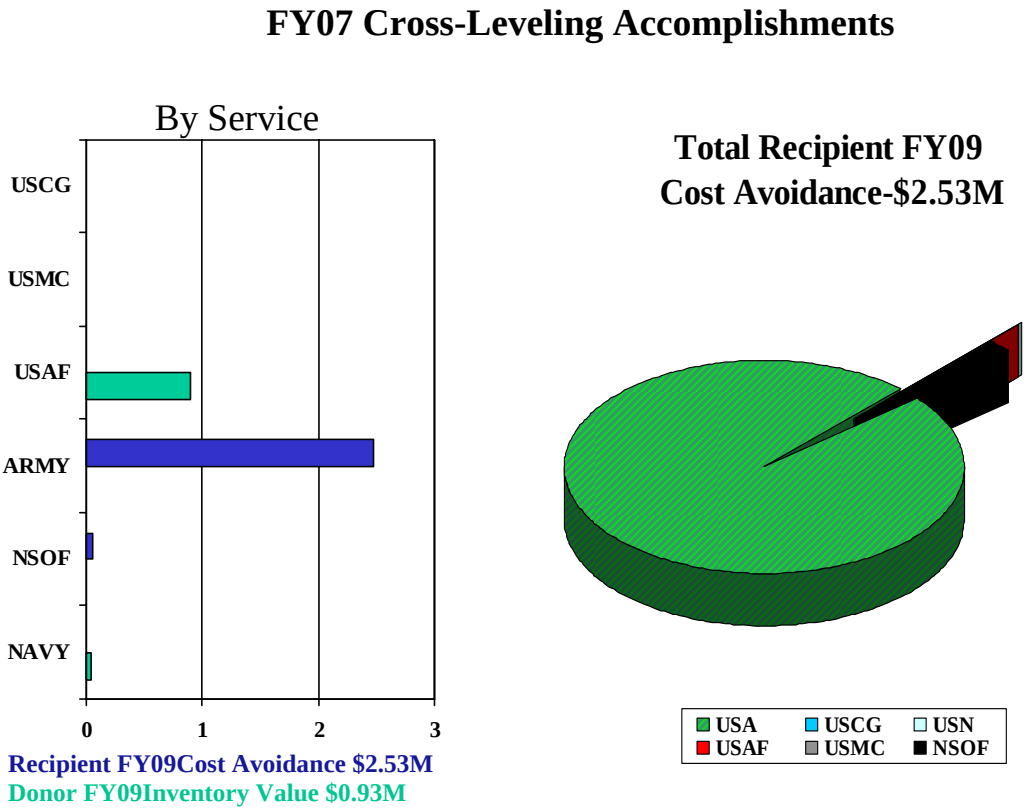


Figure 27

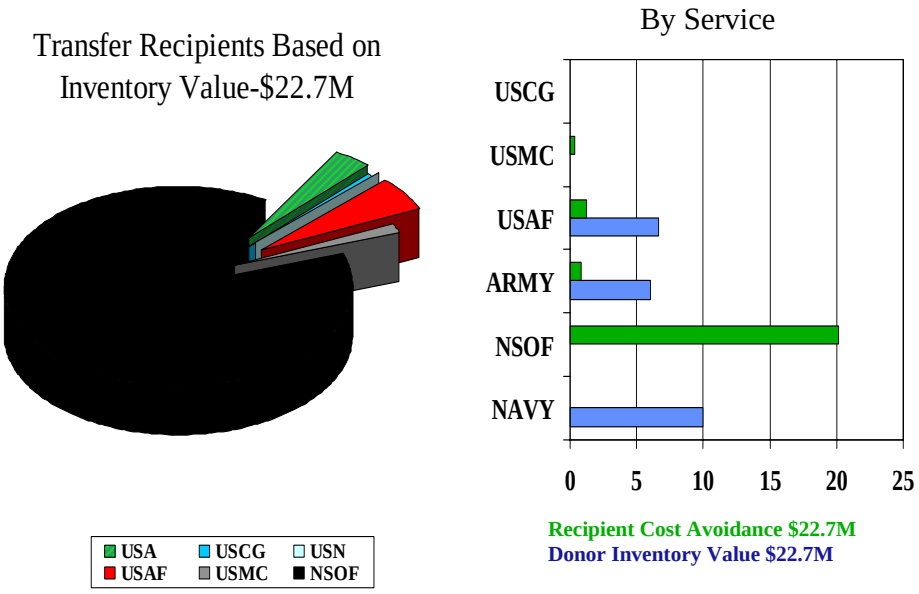


Figure 28

B. Munitions Readiness Reporting (MRR). The JMC, as the SMCA FOA, first provided the MRR in FY02. Since then, the JMC has ensured the MRR constantly evolves to meet the needs of its customers. It includes metrics that measure munitions availability, distribution, quality and industrial base capability. In FY07, JMC partnered with the Program Manager for Ammunition, Marine Corps Systems Command, to develop a second generation Marine Corps munitions readiness reporting system, which went fully operational in FY07.
ANALYSIS: FY07 advancements are deemed a successful step toward Joint Service munitions readiness reporting.

DISTRIBUTION MANAGEMENT

1. METRICS. This category consists of the Delivery Reliability and Quantity/Condition Code Accuracy Indices and is comprised of the metrics shown in Figure 29.

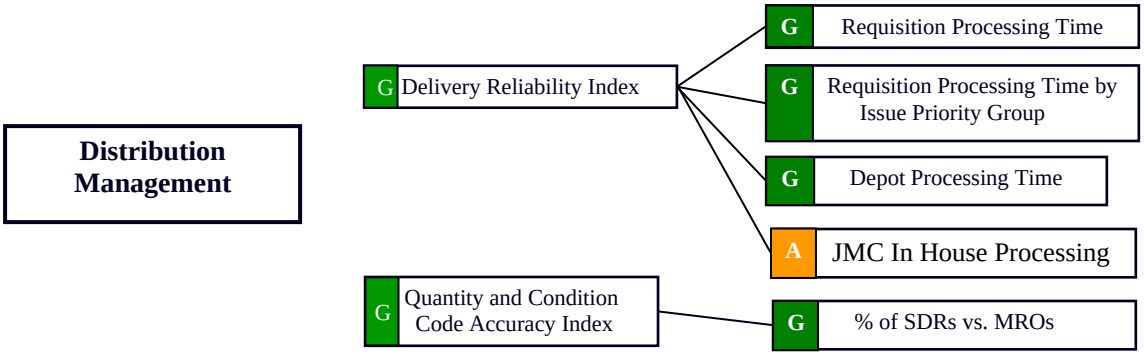


Figure 29

A. Delivery Reliability Index (KPI). This index consists of the following metrics and is rated **GREEN** for FY07. For comparative analysis, this index was rated **GREEN** in FY06.

1. Requisition Processing Time. This metric is weighted as 25% of the Delivery Reliability Index, and measures the SMCA's ability to meet required delivery dates (RDDs) for CONUS customer requisitions. The metric computation used is requisition on-time processing from the JMC Metric Management Reporting System (MMRS) (https://www6.osc.army.mil/mmrs/). The data is derived from the Commodity Command Standard System (CCSS). Rating criteria are as follow: green is greater than or equal to 95%, amber is 90 – 94%, red is less than 90%.
ANALYSIS: At an average of 99.93%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (99.70%) in FY06, **GREEN** (99.68%) in FY05 and **GREEN** (99.13%) in FY04.

2. Requisition Processing Time by Issue Priority Group (IPG). This metric is weighted as 25% of the Delivery Reliability Index, and measures the SMCA's ability to meet the delivery standard for customers as measured by the following IPGs: IPG 1, IPG 2, and IPG 3. The metric computation used is requisition on-time processing from the JMC MMRS. Rating criteria

are as follow: green is greater than or equal to 95%, amber is 90 – 94%, red is less than 90%.
ANALYSIS: At an average of 99.96% for IPG 1, 100% for IPG 2, and 99.94% for IPG 3, this metric is rated **GREEN** for FY07. For comparative analysis, in FY06 this metric had an average of 99.45% for IPG 1, 99.66% for IPG 2, 99.78% for IPG 3 for the requisition process time by priority and was rated **GREEN** for FY06.

3. Depot Processing Time. This metric is weighted as 25% of the Delivery Reliability Index, and measures the SMCA Depots' ability to meet required delivery dates (RDDs) for CONUS customer requisitions. The Depots included are: Crane, Blue Grass, Anniston, Hawthorne, Lake City, Letterkenny, McAlester, Milan, Red River, and Tooele. The metric computation used is requisition on-time processing from the JMC MMRS. Rating criteria are as follow: green is greater than or equal to 95%, amber is 90 – 94%, red is less than 90%.
ANALYSIS: At an average of 100% for all Depots, this metric is rated **GREEN** for FY07. For comparative analysis, this metric is rated **GREEN** (99.82%) for FY06.

4. JMC In House Requisition Processing Time. This metric is weighted 25% of the Delivery Reliability Index. This is a new metric for FY07 and measures the time from when the requisition is received at HQ JMC until the Material Release Order (MRO) is released to the appropriate Depot/Storage Site. In accordance with AR 725-50, Priority Designators (PD) 01-08 have 1 day to be MRO'd; PD 09-15 have up to 3 days to be MRO'd. Data is extracted from CCSS. Rating criteria are as follows: green is 90% or greater, Amber is 85% -89%, and red is less than 85%.
ANALYSIS: With an average of 89% for all requisitions, this metric is rated **AMBER** for FY07. Data for FY07 does not include the 1st Quarter due to start up difficulties. The SMCA FOA is providing information from this metric to the appropriate commodity teams for assessment and follow on action where indicated.

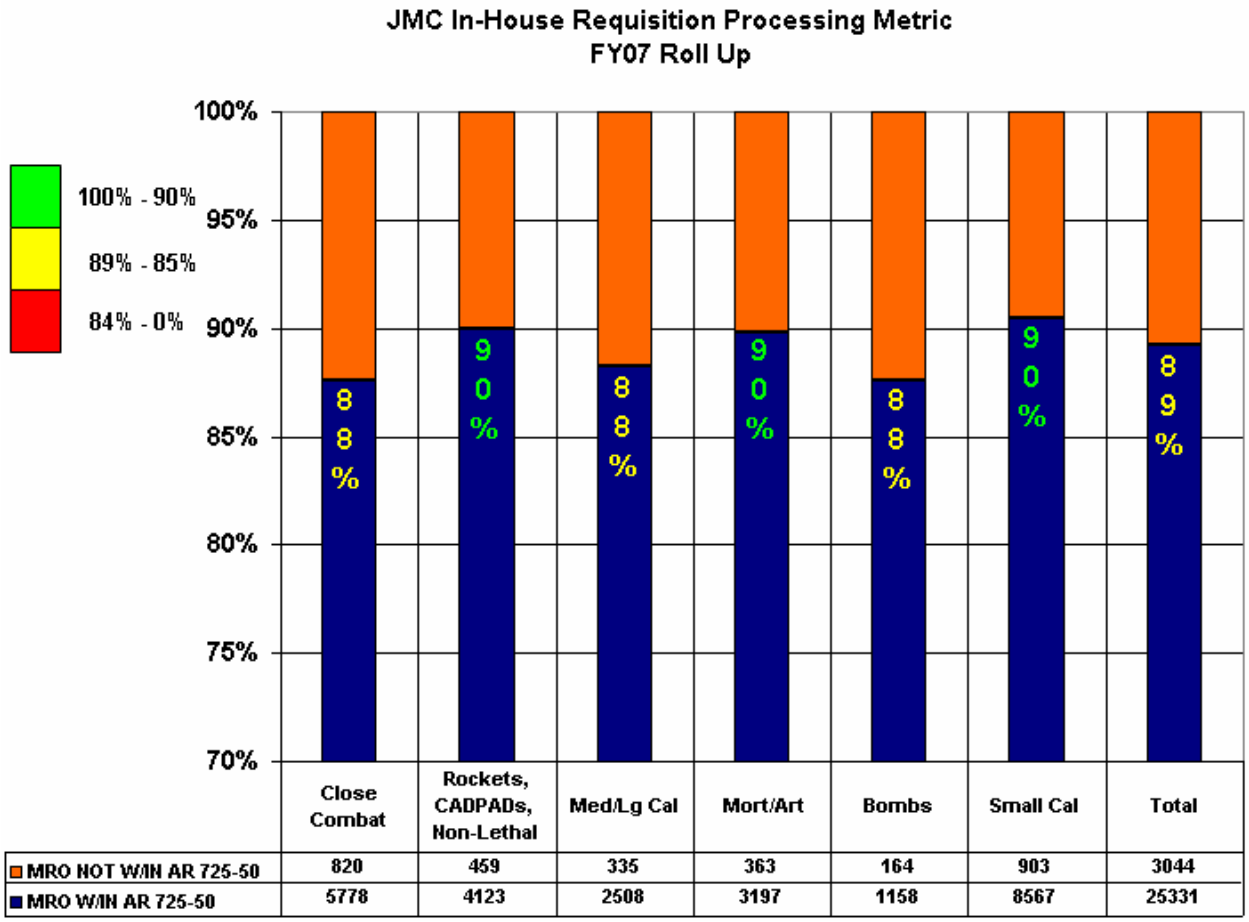


Figure 30

B. **<u>Quantity and Condition Code Accuracy Index</u>.** This index consists of a single metric and is rated **GREEN** for FY07. The metric is Percent of Supply Discrepancy Reports (SDRs) vs. the number of Material Release Orders (MROs) shipped by Military Service. This metric presents the accuracy of the quantity and condition code of ammunition delivered against customer requirements. This metric shows the percentage of number of SDRs vs the number of MROs shipped. SDR data is obtained from the Supply Discrepancy Reporting utility on the AEPS website. The MRO data is obtained from the CCSS Document Control Files (DCF) sectors that contain shipping information. SDR data provides the number of SDRs filed against shipments originating from the sites covered in the metric. The MRO data represents the number of MROs shipped by those sites. Rating criteria are as follow: green is greater than or equal to 99.5%, amber is 99% – 99.49%, red is less than 99%.

ANALYSIS: At 99.9%, this metric is rated **GREEN** for FY07. For comparative analysis, this metric was rated **GREEN** (99.8%) in FY06 and **GREEN** (99.9%) in FY05. Sites with a rating of amber or red are required to provide corrective action plans to the SMCA FOA. These plans are monitored for follow-up execution by SMCA FOA inventory personnel.

RECOMMENDATION: The SMCA FOA continues operations established to date until the Defense Logistics Agency (DLA) has implemented the DLA WebSDR; which is currently in testing. A determination was completed in FY07 that WebSDR has applicability to ammunition

and that use of WebSDR by the SMCA FOA could improve accountability at sites currently using the Army Electronic Product System (AEPS) system.

2. SMCA EXECUTOR/FOA SIGNIFICANT ITEMS

A. Sealift Transportation to Southwest Asia (SWA). The SMCA FOA supported Operation Iraqi Freedom (OIF) with seven vessel loads in FY07; five on the "Virginian", and one each on the "Advantage" and "Global Patriot." These seven vessel loads provided stocks to DoD Forces in Central Command (CENTCOM) in support of OIF with 26,677 tons of munitions supporting both Joint operational and theater training requirements. Munitions supplied ranged from small arms to large bombs.
ANALYSIS: For information only.

B. Airlift Transportation. During FY07, the SMCA FOA worked with all Military Services and FMS customers to deliver required material to various locations around the world. A total of 2,712.44 Short Tons were airlifted, with 2,071.35 by channel and 641.09 by Special Assignment Airlift Mission (SAAM). Figure 31 highlights the OCONUS movements coordinated by the SMCA FOA. The majority of airlift (76%) goes by "channel." Global Channel Operations (XOG) or "channel" is the single agency responsible for directing worldwide strategic channel airlift operations for passenger and cargo movement in the Defense Transportation System. To that end, XOG develops route structures, schedules airlift missions and provides oversight on channel system performance. They work hand-in-hand with Air Mobility Command aerial ports, and en route locations, as well as mobility management, command and control, current operations and global readiness functions to meet the sustainment movement requirements of Air Mobility Command customers.
ANALYSIS: For information only.

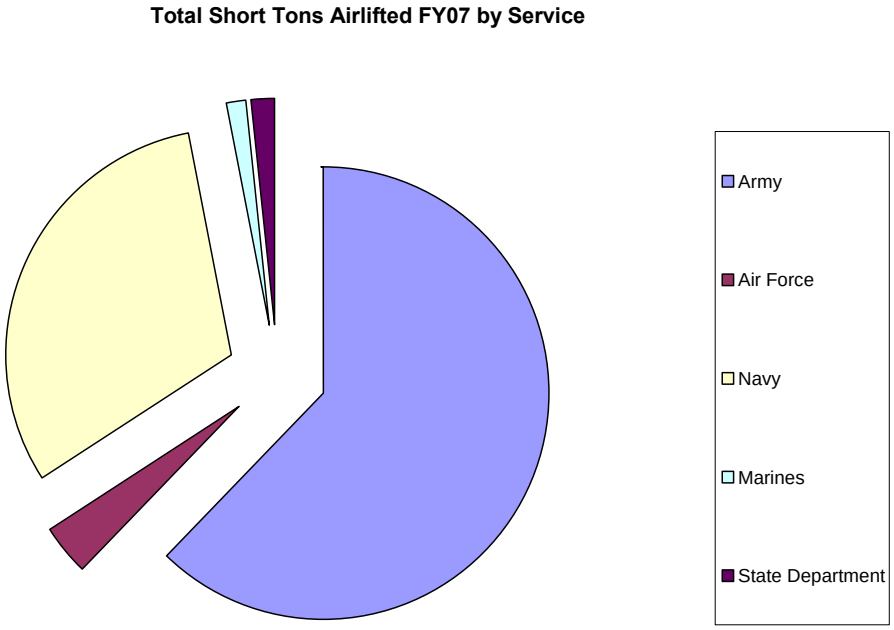


Figure 31

C. Increased Accuracy of the Priority System Utilization. During FY07, the SMCA FOA conducted a Lean/Six Sigma Green Belt project to minimize the improper use of the requisition priority code and required delivery date. In accordance with AR 725-50, Requisitioning, Receipt and Issue System, a requisition's required delivery date is to be consistent with the requisition's priority code. If the data is inconsistent, it results in unnecessary efforts and costs associated with processing the requisition. As a result of the Lean/Six Sigma project, the web-based requisitioning input screen now includes a validation that will not allow the submission of the requisition unless the RDD and the priority code are consistent. Proper use of the priority code and RDD will give the shipping activity more lead time, and ensure on time delivery of ammunition to the warfighter.
ANALYSIS: For information only.

D. Foreign Military Sales (FMS) Support. The SMCA FOA coordinated 15 FMS vessels and 77 FMS SAAM. The 77 FMS SAAMs were in direct support of the GWOT, while the 15 FMS vessels did not directly support GWOT. Over 57% of the tonnage in FY07 moved via sealift which is the least expensive form of transportation to OCONUS. Over 34% of the tonnage was moved via SAAM, a large portion of which was transported to Afghanistan. Figure xx shows all modes of FMS Transportation Channel, Sealift, and SAAM.
ANALYSIS: For information only.

E. Golden Cargo. Golden Cargo is a nationwide exercise within the DoD that links the US Army Reserve Component (USAR) and US Army National Guard (USARNG) with real world ammunition logistics operations and training opportunities. The SMCA identifies the mission that provides the USAR and USARNG with hands on training; which, in turn, improves the ability of the SMCA to support the DoD with ammunition requirements. The exercise was instituted in 1991 as a result of the SMCA's need to relocate large amounts of ammunition from base closures and mission reductions and the USARNG's requirement for training. Since its inception, Golden Cargo has handled more than 250,000 short tons of ammunition over 18 million miles. The FY07 Golden Cargo exercise was executed in Jun 07 at Sierra Army Depot (SIAD), HWAD, BGAD, MCAAP, CAAA, and TEAD, and involved approximately 1,500 soldiers from over 38 units. The Golden Cargo exercise benefits the Federal government by providing critical ammunition logistics training opportunities for USAR and USARNG Forces.
ANALYSIS: For information only.

3. MILITARY SERVICE AND O/EDCA SIGNIFICANT ITEMS: There were no significant items to report under this category.